

Exercises

[A] : Choose The Correct Answer : -

1	The ratio between the perimeter of the square and its side length equal	A) 1 : 3 B) 3 : 1 C) 1 : 4 D) 4 : 1	D
2	The ratio between the perimeter of the rhombus and its side length is	A) 1 : 3 B) 3 : 1 C) 1 : 4 D) 4 : 1	D
3	The ratio between the perimeter of the equilateral triangle and its side length is	A) 1 : 3 B) 3 : 1 C) 1 : 4 D) 4 : 1	B
4	The ratio between the side length of the equilateral triangle and its perimeter is	A) 1 : 3 B) 3 : 1 C) 1 : 4 D) 4 : 1	A
5	The ratio between the side length of the rhombus and its perimeter is	A) 1 : 3 B) 3 : 1 C) 1 : 4 D) 4 : 1	C
6	The ratio between the side length of the square and its perimeter is	A) 1 : 3 B) 3 : 1 C) 1 : 4 D) 4 : 1	C
7	The ratio between the diameter of the circle and its circumference is	A) $1 : \pi$ B) $1 : 2\pi$ C) $\pi : 1$ D) $2\pi : 1$	A
8	The ratio between the radius of the circle and its circumference is	A) $1 : \pi$ B) $1 : 2\pi$ C) $\pi : 1$ D) $2\pi : 1$	B

9	The ratio between the circumference of the circle and its radius is A) $1:\pi$ B) $1:2\pi$ C) $\pi:1$ D) $2\pi:1$	D
10	The ratio between the circumference of the circle and its diameter is A) $1:\pi$ B) $1:2\pi$ C) $\pi:1$ D) $2\pi:1$	C
11	The side length of a square = 3 cm. , then the ratio between its side length and its perimeter equals A) $1:3$ B) $3:1$ C) $1:4$ D) $4:1$	C
12	The ratio among $\frac{1}{3} : \frac{1}{4} =$ A) $1:2$ B) $3:4$ C) $4:3$ D) $1:4$	C
13	The ratio between 300 gm. and $1\frac{1}{3}$ kg = A) $1:2$ B) $1:5$ C) $1:10$ D) $1:30$	B
14	The ratio between 18 hours and one day = (in the simplest form) A) $4:3$ B) $3:4$ C) $3:2$ D) $2:3$	B
15	The ratio between 12 kirats and 2 feddans = A) $1:2$ B) $1:4$ C) $2:3$ D) $4:1$	B
16	125 piasters : 5 pounds = (in the simplest form) A) $4:1$ B) $1:4$ C) $25:1$ D) $1:25$	B
17	A machine irrigates 15 feddans in 10 hours , then its rate = feddans/hour. A) 15 B) 10 C) 1.5 D) 1	C
18	If Hazem drinks 21 glasses of milk weekly , then the rate of what he drinks daily is glasses A) 3 B) 7 C) 14 D) 20	A

19	An agricultural machine ploughs 14 feddans in 3.5 hours , then the rate of performance of the machine in Feddan per hour is A) 0.5 B) 8 C) 4 D) 49	C
20	If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C =$ A) 2 : 3 B) 2 : 5 C) 3 : 5 D) 3 : 2	B
21	If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 , then the measure for the smallest angle is A) 10 B) 45 C) 30 D) 60	C
22	If $a : b = 50\%$, $b : c = 2 : 3$, then $a : c =$ A) 1 : 2 B) 2 : 3 C) 1 : 3 D) 3 : 1	C
23	From the properties of the proportion , then the product of the extremes = the product of the A) Ratio B) Means C) Area D) Percentage	B
24	If $\frac{3}{4} = \frac{X}{20}$, then $X =$ A) 30 B) 6 C) 15 D) 60	C
25	If $\frac{2}{5} = \frac{X}{20}$, then $X - 2 =$ A) 8 B) 4 C) 6 D) 2	C
26	If $\frac{8}{X} = 0.5$, then $X =$ A) 4 B) 8 C) 16 D) 40	C
27	If $\frac{A}{4} = 25\%$, then $A =$ A) 10 B) 20 C) 1 D) 100	C
28	If $\frac{X+12}{6} = 4$, then $X =$ A) 24 B) 12 C) 6 D) 8	B

39

- The form of the equal ratios $\frac{2}{3} = \frac{4}{6} = \frac{8}{12}$ is called
 A) Ratio B) Rate C) Percentage D) Proportion

D

40

- If the length of Suez Canal on a map of drawing scale $1 : 1\,100\,000$ is 15 cm., then its real length in km. equals
 A) 155 B) 165 C) 170 D) 185

B

41

- The sum of measures of any two consecutive angles in the parallelogram
 A) 360 B) 180 C) 90 D) 60

B

42

- The two diagonals are equal in length and perpendicular in
 A) square B) triangle C) rhombus D) rectangle

A

43

- The diagonals are perpendicular and not equal in length in
 A) square B) triangle C) rhombus D) rectangle

C

44

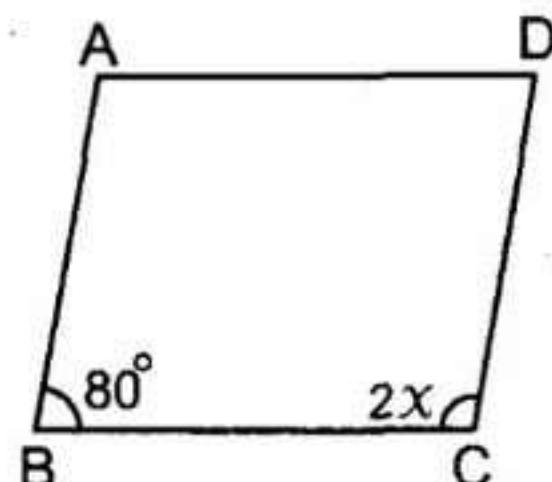
- The diagonals are equal and not perpendicular in length in
 A) square B) triangle C) rhombus D) rectangle

D

In the opposite figure :

45

- ABCD is a parallelogram in which
 $m(\angle B) = 80^\circ$ and $m(\angle C) = 2x$,
 , then the value of x in degrees =



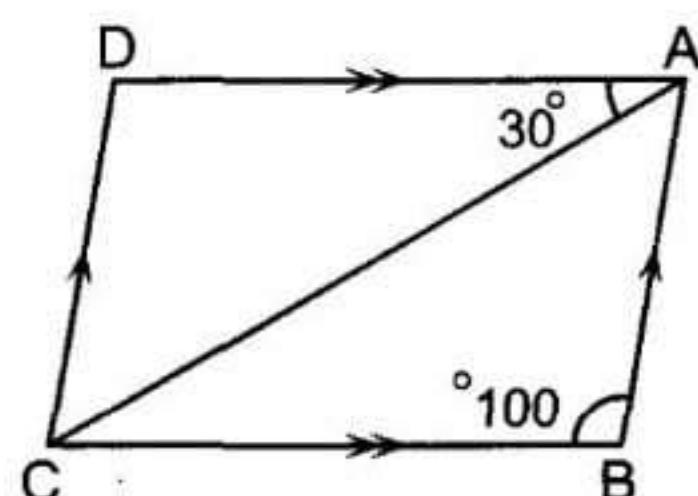
- A) 100 B) 80 C) 50 D) 40

C

In the opposite figure :

46

- ABCD is a parallelogram
 , $m(\angle B) = 100^\circ$ and $m(\angle CAD) = 30^\circ$,
 , then $m(\angle BAC) = \dots^\circ$



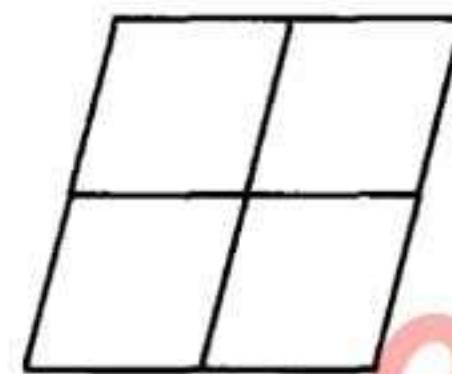
A

- A) 50 B) 130 C) 70 D) 60

In the opposite figure :

47

The number of parallelograms which can be obtained is



- A) 4 B) 5 C) 7 D) 9

48

If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then it is called

- A) square B) triangle C) rhombus D) rectangle

49

If two adjacent sides in a parallelogram are equal in length and its diagonals are perpendicular ,then it is called

- A) square B) triangle C) rhombus D) rectangle

50

The centimetre cube is a unit for measuring the

- A) Length B) Volume C) Area D) Perimeter

51

The area of the base of a cuboid is 6 cm, and its height is 7 cm. , then its volume = cm³

- A) 67 B) 42 C) 100 D) 76

52

The cuboid with equal dimensions is called

- A) Circle B) Cube C) Cone D) Cylinder

53

The volume of cuboid whose dimensions are 2 cm. 4 cm. and 6 cm.

- A) 48 cm² B) 48 cm³ C) 48 cm D) 48 cm⁴

54

The edge length of a cube is 5 cm. , then its volume cm³

- A) 25 B) 125 C) 5 D) 250

55

The edge length of a cube is 0.2 dm. , then its volume cm³

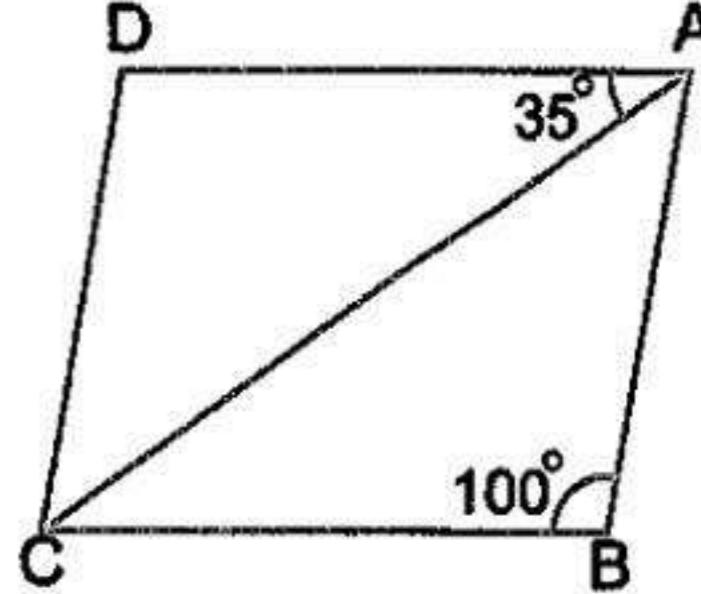
- A) 2 B) 8 C) 20 D) 200

56	The edge length of a cube = 9 cm. , then the sum of all its edge lengths is A) 90 B) 900 C) 108 D) 1080	C
57	The volume of a cuboid with a squared base of side length 6 cm. and its height is 10 cm. equals cm^3 A) 60 B) 120 C) 360 D) 600	C
58	If the volume of a cuboid is 24 cm^3 and the area of its base is 8 cm^2 , then its height = cm A) 3 B) 6 C) 192 D) 0.3	A
59	The volume of a cuboid equals 400 cm^3 and its base is with length = 8 cm. and width = 5 cm., then its height equals cm A) 50 B) 10 C) 80 D) 20	B
60	The base perimeter of a cube is 36 cm, then its volume = cm^3 A) 9 B) 81 C) 729 D) 108	C
61	If the sum of the edge lengths of a cube = 144 cm. , then its volume equals A) 144 cm B) 144 cm^2 C) 1728 cm D) 1728 cm^3	D
62	If the volume of a cube = 0.125 cm^3 , then its edge length = cm. A) 25 B) 2.5 C) 5 D) 0.5	D
63	If the volume of the cube equals 125 dm^3 , then the length of its edge = dm A) 5 B) 6 C) 7 D) 8	A
64	The volume of the cube is 125 cm^3 , then its base area = A) 25 cm^2 B) 25 cm C) 5 cm^2 D) 5 cm	A
65	4.63 litres = cm^3 A) 463 B) 4630 C) 46 300 D) 46.3	B

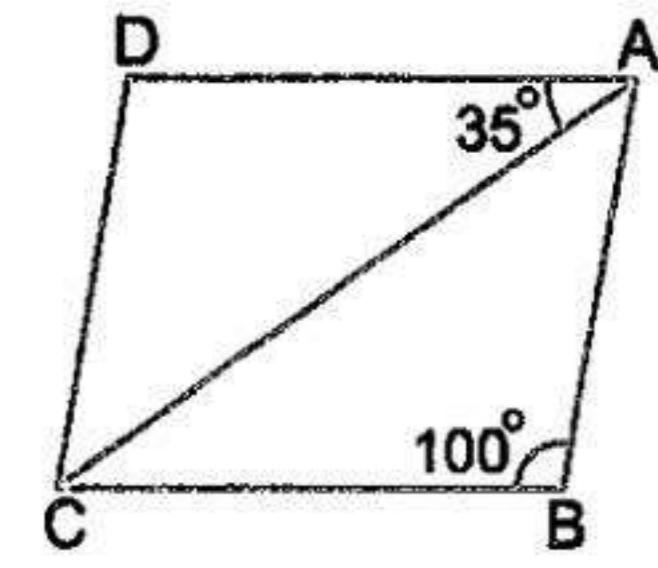
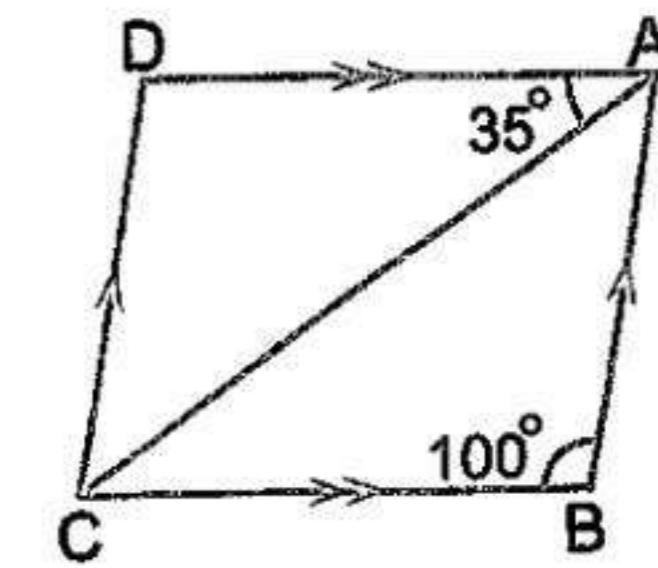
66	$12 \text{ dm}^3 = \dots \text{ cm}^3$	A) 12 B) 120 C) 1200 D) 12000	D
67	$\frac{3}{4} \text{ litre} = \dots$	A) 75 ml B) 750 cm ³ C) 75 dm ³ D) 0.075 m ³	B
68	$2.5 \text{ cm}^3 = \dots \text{ ml}$	A) 2.5 B) 25 C) 250 D) 2500	A
69	$0.75 \text{ litre} = \dots \text{ dm}^3$	A) 0.75 B) 7.5 C) 75 D) 750	A
70	$1500 \text{ cm}^3 = \dots \text{ litres}$	A) 1500 B) 150 C) 15 D) 1.5	D
71	$7.5 \text{ m}^3 = \dots \text{ dm}^3$	A) 750 B) 75 C) 750 000 D) 7500	D
72	$6500 \text{ dm}^3 = \dots \text{ m}^3$	A) 6.5 B) 65 C) 650 D) 6500 000	A
73	$300 \text{ mm}^3 = \dots \text{ cm}^3$	A) 0.3 B) 0.03 C) 0.003 D) 0.0003	A
74 is quantitative data.	A) Address B) tallness C) Blood type D) Date of birth	B
75	The opposite data are quantitative except	A) address B) tallness C) weight D) age	A
76	The opposite data are quantitative except	A) weight B) age C) tallness D) Date of birth	D

77	The given data are descriptive except the A) Age B) Address C) Blood type D) Date of birth	A
78	If the values of a frequency distribution lie between (20 ,60) , then the range of this distribution equals A) 20 B) 60 C) 80 D) 40	D
79	If the maximum mark of marks of a set of pupils marks was 57 and the minimum mark was 29 , then the range = A) 86 B) 28 C) 68 D) 82	B
80	If 78 is the greatest individual of a set and the range = 39 , then the smallest individual of this set = A) 39 B) 78 C) 50 D) 1800	A
81	The range of the values : 7 , 3 ,6 , 9 and 5 = A) 3 B) 4 C) 5 D) 6	D
82	If 25 is the smallest individual of a set and the range is 37 , then the greatest individual of this set = A) 12 B) 25 C) 37 D) 62	D
83	If the range of the marks distribution of mathematics equals 40 and the length of a set equal 5 , then the number of sets equals A) 35 B) 45 C) 8 D) 20	C
84	The difference between the greatest individual and the smallest individual of a set of values is called A) Range B) Ratio C) Percent D) Proportion	A

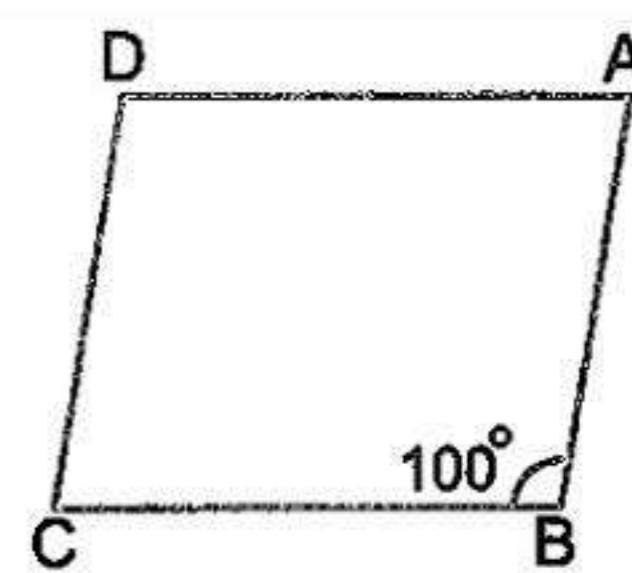
Choose the correct answer :

1. The range of the set of values : 7 , 3 , 6 , 9 and 5 is
 (2 or 4 or 6 or 12)
-
2. $\frac{3}{4}$ = (in decimal form) (0.2 or 0.5 or 0.25 or 0.75)
-
3. An agricultural tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is hours.
 (4 or 6 or 7 or 8)
-
4. In the opposite figure :
 ABCD is a parallelogram. , then
 $m(\angle ACD)$ =
 (35° or 45° or 100° or 180°)
- 
-
5. If $\frac{2}{5} = \frac{x}{15}$, then x = (2 or 5 or 6 or 15)
-
6. The following data are descriptive data except
 (favorite colour. or age. or birth place. or blood species.)
-
7. If one angle of a parallelogram is right , then it is called a
 (rectangle. or square. or rhombus. or cube.)
-
8. $\frac{24}{5} = \dots$ ($4\frac{1}{5}$ or $3\frac{2}{5}$ or $4\frac{4}{5}$ or $2\frac{4}{5}$)
-
9. If the marks of 6 students in one exam are 29 , 33 , 57 , 40 , 36 and 49 , then the range of these marks = (32 or 33 or 28 or 86)
-
10. If $\frac{4}{6} = \frac{12}{x}$, then $x + 2$ = (16 or 18 or 20 or 22)
-
11. $1\frac{3}{4} = \dots \%$ (25 or 50 or 75 or 175)

12. $\frac{513}{614}$ $\frac{432}{145}$ ($>$ or $<$ or $=$ or \geq)
13. The range of the values 50 , 25 , 35 and 20 is
(10 or 20 or 30)
14. If $\frac{2}{3} = \frac{10}{x}$, then x =
(6 or 15 or 20)
15. The two diagonals are perpendicular in
(rectangle or rhombus or triangle or parallelogram)
16. If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is
(1 : 10 or 1 : 1 000 or 1 : 100)
17. If $a : b = 3 : 5$ and $b : c = 5 : 7$, then $a : c =$
(2 : 3 or 3 : 4 or 3 : 7 or 8 : 7)
18. $1 - 25\% =$
($\frac{3}{4}$ or $\frac{1}{4}$ or $\frac{1}{8}$ or $\frac{3}{8}$)
19. If the numbers 3 , 5 , x and 20 are proportional , then $x + 3 =$
(6 or 12 or 15 or 21)
20. If the drawing length is 6 cm. , and the real length is 6 metres , then the drawing scale =
(1 : 10 or 1 : 100 or 1 : 1000 or 1 : 1)
21. $\frac{3}{4}$ litre = mL.
(0.75 or 7.5 or 750 or 75)
22. If 45% of $x = 90$, then $x =$
(20 or 100 or 200 or 300)
23. $\frac{1}{2}$ kg. 700 gm.
($<$ or $>$ or $=$ or \geq)
24. $\frac{3}{4} : \frac{5}{6} = 9 :$
(6 or 10 or 11 or 12)
25. $\frac{7}{20} =$
(7 % or 20 % or 35 % or 42 %)
26. In the parallelogram , the sum of the measures of any two consecutive angles =°
(45 or 90 or 180 or 360)
27. $4 \text{ m}^3 =$ dm^3
(40 or 400 or 4 000 or 40 000)
28. $1.45 \text{ litres} + 0.5 \text{ dm}^3 =$ litres.
(1.5 or 1.95 or 1.55 or 6.5)

29. If the numbers 4 , x , 12 , 18 are proportional , then $x = \dots$
 (6 or 8 or 10 or 12)
30. The cuboid has six faces each of them is
 (a rectangle or a square or a rhombus or a cube)
31. If the real length of an insect is 0.3 mm. and its length in a picture 4.5 cm. ,
 then the drawing scale =
 (1 : 15 or 1 : 150 or 150 : 1 or 15 : 1)
32. In the opposite figure :
 ABCD is parallelogram
 , then $m(\angle ACD) = \dots$
 (35° or 55° or 45° or 60°)
- 
33. If $\frac{4}{6} = \frac{8}{x}$, then $x + 2 = \dots$
 (15 or 14 or 16 or 12)
34. The ratio between 15 hours , one day =
 (1 : 15 or 15 : 1 or 8 : 5 or 5 : 8)
35. All of the following data are quantitative except
 (tallness or age or name or phone number)
36. In the opposite figure :
 ABCD is parallelogram
 , then $m(\angle ADC) = \dots$
 (35° or 45° or 100° or 135°)
- 
37. If one of angles of the parallelogram is right , then the resulting figure is
 a
 (rectangle or square or rhombus or cube)
38. If the volume of a cuboid = 300 cm³ , its base area = 25 cm² , then its
 height = cm.
 (12 or 13 or 14 or 15)
39. If one angle of the parallelogram is right and its sides are equal in length , then
 it is called
 (square or rhombus or triangle or rectangle)

40. The diagonals are perpendicular and have the same length in the
 (square or rectangle or trapezium or parallelogram)
41. 12 % of 500 kg. = kg. (40 or 50 or 60 or 70)
42. $\frac{x}{5} = 60\%$, then $x + 3 =$ (3 or 6 or 600 or 30)
43. If the drawing scale > 1 , then this expresses
 (magnification or reduction or congruent or otherwise)
44. Parallelogram with equal diagonals in length is called
 (trapezium or rectangle or rhombus or square)
45. A car consumes 4 litres of fuel to cover distance 100 km., then the rate of consumption is litre per km. (25 or 0.4 or 0.04 or 400)
46. If the real length of a tree is 6 m. and its drawing length is 3 cm., then the drawing scale = :
 (1 : 100 or 1 : 200 or 1 : 300 or 1 : 600)
47. $0.3 \text{ m}^3 =$ dm^3 (3 000 or 300 or 30 or 3)
48. $\frac{4}{5} =$ % (50 or 60 or 70 or 80)
49. $\frac{1}{2} \text{ kg.} : 700 \text{ gm.} =$ ($2:7$ or $\frac{7}{8}$ or $\frac{5}{7}$ or $\frac{7}{9}$)
50. In the opposite figure:
 ABCD is a parallelogram, then:
 $m(\angle D) =$ °
 (100 or 60 or 80 or 70)
51. The ratio between the length of the side of the equilateral triangle and its perimeter = : ($1:3$ or $3:1$ or $4:1$ or $1:4$)
52. Cuboid of dimensions (5 cm., 2 cm., 7 cm.), its volume = cm^3
 (24 or 48 or 65 or 70)



Choose the correct answer:

- (1) The range of the set of values: 7, 3, 6, 9 and 5 is
 a 2 b 4 c 6 d 12
- (2) $\frac{3}{4} = \dots$ (in decimal form)
 a 0.2 b 0.5 c 0.25 d 0.75
- (3) An agricultural tractor ploughs 28 feddans in 4 hours, then the time needed to plough 42 feddans is hours.
 a 4 b 6 c 7 d 8
- (4) If one angle of a parallelogram is right, then it is called a
 a rectangle b square c rhombus d cube
- (5) $\frac{24}{5} = \dots$
 a $4\frac{1}{5}$ b $3\frac{2}{5}$ c $4\frac{4}{5}$ d $2\frac{4}{5}$
- (6) If $\frac{4}{6} = \frac{12}{x}$, then $x + 2 = \dots$
 a 16 b 18 c 20 d 22
- (7) If $\frac{2}{3} = \frac{10}{x}$, then $x = \dots$
 a 6 b 15 c 20 d 21
- (8) The following data are descriptive except
 a color b address c age d name
- (9) If the real length is 6 cm and the drawing length is 6 cm, then the drawing scale is
 a 1:10 b 1:1000 c 1:100 d 1:1
- (10) If the volume of cuboid is 24 cm^3 and the area of its base is 6 cm^2 , then its height = cm.
 a 3 b 4 c 12 d 18

- (11) The diagonals are perpendicular in
- a rectangle
 - b square
 - c trapezium
 - d triangle
- (12) If $A:B = 2:5$ and $B:C = 5:9$, then $A:C = \dots$
- a 5:2
 - b 2:9
 - c 5:7
 - d 2:11
- (13) The volume of a cube in which the sum of its all edge lengths 36 cm is cm^3
- a 27
 - b 63
 - c 72
 - d 108
- (14) The opposite data are quantitative except the
- a age
 - b tallness
 - c weight
 - d color
- (15) If $\frac{x+12}{8} = 2$, then $x = \dots$
- a 6
 - b 4
 - c 8
 - d 16
- (16) If the perimeter of a cube base is 36 cm, then its volume is cm^3
- a 36
 - b 6
 - c 729
 - d 216
- (17) 25% of 1000 = 50% of
- a 2000
 - b 1500
 - c 1250
 - d 500
- (18) If the real length of a tree is 6 m and its drawing length is 3 cm, then the drawing scale =
- a 1:100
 - b 1:200
 - c 1:300
 - d 1:600
- (19) The rhombus has lines of symmetry.
- a zero
 - b 1
 - c 2
 - d 4
- (20) If the ratio 7:13 is the same ratio $x:52$, then $x = \dots$
- a 14
 - b 21
 - c 28
 - d 35
- (21) $1.45 \text{ litre} + 0.5 \text{ dm}^3 + 50 \text{ cm}^3 = \dots \text{ litres}$
- a 51.95
 - b 2
 - c 2.45
 - d 3

(22) From the quantitative data

- a color b sport c gender d age

(23) 75% litre + 25% dm³ =

- a 10 litres b 1000 cm³ c 100 dm³ d 100 cm³

(24) A cube, its volume is $\frac{1}{8}$ cm³, then the perimeter of one face is cm.

- a $\frac{1}{2}$ b 8 c 4 d 2

Complete:

(1)	1.5 litres + 0.5 dm ³ + 500 cm ³ = litres	"2.5"												
(2)	The volume of a cuboid is 64 cm ³ and the area of its base is 16 cm ² , then its height = cm	"4"												
(3)	If the real length of an insect is 0.3 mm and its length in a picture is 4.5 cm, then the drawing scale is	"150:1"												
(4)	The area of the triangle = $\frac{1}{2} \times \dots \times \dots$	"b×h"												
(5)	65 dm ³ = litres.	"65"												
(6)	A wooden box in the form of a cube, its external volume 1000 cm ³ and its capacity is 729 cm ³ , then the volume of wood of the box is cm ³	"271"												
(7)	If the height of the fence of a villa in the design is 5 cm and its real height is 6 m, then the drawing scale is	"1:120"												
(8)	The following table shows the marks of 50 pupils in one month in Math.: <table border="1"> <thead> <tr> <th>Marks</th> <th>10-</th> <th>20-</th> <th>30-</th> <th>40-</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>No. of pupils</td> <td>5</td> <td>15</td> <td>20</td> <td>10</td> <td>50</td> </tr> </tbody> </table> Then the number of pupils whose marks are less than 40 is pupils.	Marks	10-	20-	30-	40-	Total	No. of pupils	5	15	20	10	50	"40"
Marks	10-	20-	30-	40-	Total									
No. of pupils	5	15	20	10	50									

(9)

The following table shows the marks of 50 pupils in one month in Math.:

Marks	10-	20-	30-	40-	Total
No. of pupils	6	10	20	14	50

- (1) The number of pupils whose marks are less than 20 is pupils.
 (2) The number of pupils whose marks are 30 or more is pupils

"6"
 "34"

(10)

$5000 \text{ gm} : 8 \text{ kg} = \dots$ (in the simplest form)

"5:8"

(11)

$$\frac{3}{10} = \dots \%$$

"30"

(12)

The volume of cuboid = the area of base $\times \dots$

"height"

(13)

3 litres = cm^3 .

"3000"

(14)

The difference between the greatest value and the smallest value of a set of individuals is called

"range"

(15)

If the values of a frequency distribution lie between 20 and 60, then the range of this distribution =

"40"

(16)

If one of the angles of the parallelogram is right and two adjacent sides are equal in length, then it is called

"square"

(17)

A water tap is leaking 360 litres of water in an hour, then the leaking rate of water per minute is litres/minute.

"6"

(18)

The ratio between $\frac{1}{2} \text{ kg}$ and 700 gm =

"5:7"

(19)

If $\frac{a}{b} = \frac{4}{7}$ and $\frac{b}{c} = \frac{7}{9}$, then a:b:c =

"4:7:9"

(20)

If the drawing scale < 1, this expresses

"reduction"

(21)

The circumference of a circle =

" $2\pi r$ "

(22)

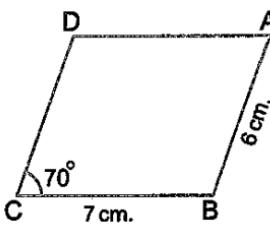
If $945 = A \times 100 + 45$, then A =

"9"

(23)

The ratio between 12 kirats and $1\frac{1}{2}$ feddans is (in the simplest form)

"1:3"

(24)	If 87 is the greatest individual of a set and the range is 39, then the smallest individual is	"48"
(25)	The volume of a cuboid equals 400 cm^3 and its base is of length 8 cm and width 5 cm, then its height equals cm.	"10"
(26)	The triangle whose side lengths are 7 cm, 7 cm and 7 cm is called	"equilateral"
(27)	In the opposite figure: ABCD is a parallelogram (1) $m(\angle A) = \dots^\circ$ (2) $m(\angle B) = \dots^\circ$ (3) AD = cm (4) DC = cm	 "70" "110" "7" "6"
(28)	$\frac{2}{5} + 30\% = \dots\%$	"70"
(29)	A square, the length of its diagonal is 10 cm, then its area = cm^2	"50"
(30)	If (A is half of B) and (B is twice of C), then A:C = :	"1:1"

∞

Essay Problems:

(1)	A container has 12 litres of oil, it is wanted to put them in smaller bottles the capacity of each of them is 400 cm^3 . Calculate the number of bottles which are needed.
(2)	If the buying price of electric sets is L.E. 72000 and sold at 12 % profit. Calculate the selling price.

- (3) The ratio among the measures of the angles of a triangle is 2:3:4 **Find** the measure of each angle of this triangle.

.....
.....
.....

- (4) Two persons started a commercial business, the first paid L.E. 5000 and the second paid L.E. 8000, at the end of the year, the net profit was L.E. 39000 **Calculate** the share of each of them from the profit.

.....
.....
.....

- (5) A metallic cube of edge length 12 cm. It needs to be converted into small ingots in the shape of cuboid each of them of dimensions 3 cm, 4 cm and 6 cm. **Calculate** the number of ingots that are obtained.

.....

- (6) Three persons started a commercial business, the first paid 15000 pound, the second paid 25000 pounds and the third paid 20000 pounds. At the end of the year, the profit was 5520 pounds. **Calculate** the share of each of them.

.....
.....
.....
.....
.....

(7) 10 litres of water were poured in a vessel in the shape of cuboid, its base is a square of side length 25 cm. **Find** the height of the water in the vessel.

.....

(8) In one of our schools, there are 360 students, if the ratio between the number of boys and the number of girls is 1:2, **Find** the number of each of boys and girls.

.....

.....

.....

(9) Heba bought a mobile phone for 660 pounds with a discount 15%. **Calculate** the price of the mobile phone before the discount.

.....

.....

.....

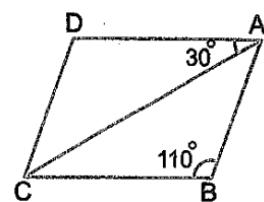
(10) If the distance between two cities on a map of drawing scale 1:500000 equals 3 cm. **Find** the real distance between the two cities.

.....

.....

.....

(11) In the opposite figure:
 ABCD is a parallelogram, without using measuring tools, complete:
 (1) $m(\angle D)$ = °
 (2) $m(\angle BAC)$ = °



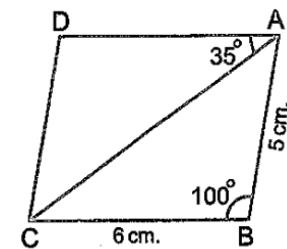
(12) In the opposite figure:

ABCD is a parallelogram, without using measuring tools, complete:

(1) $m(\angle D) = \dots^{\circ}$

(2) $m(\angle ACD) = \dots^{\circ}$

(3) The perimeter of parallelogram = cm

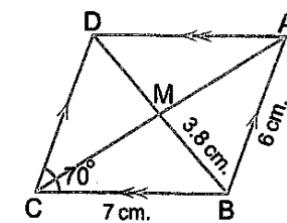


(13) In the opposite figure:

ABCD is a parallelogram, without using measuring tools, complete:

(1) $m(\angle ADC) = \dots^{\circ}$

(2) The perimeter of $\triangle BCD = \dots$ cm



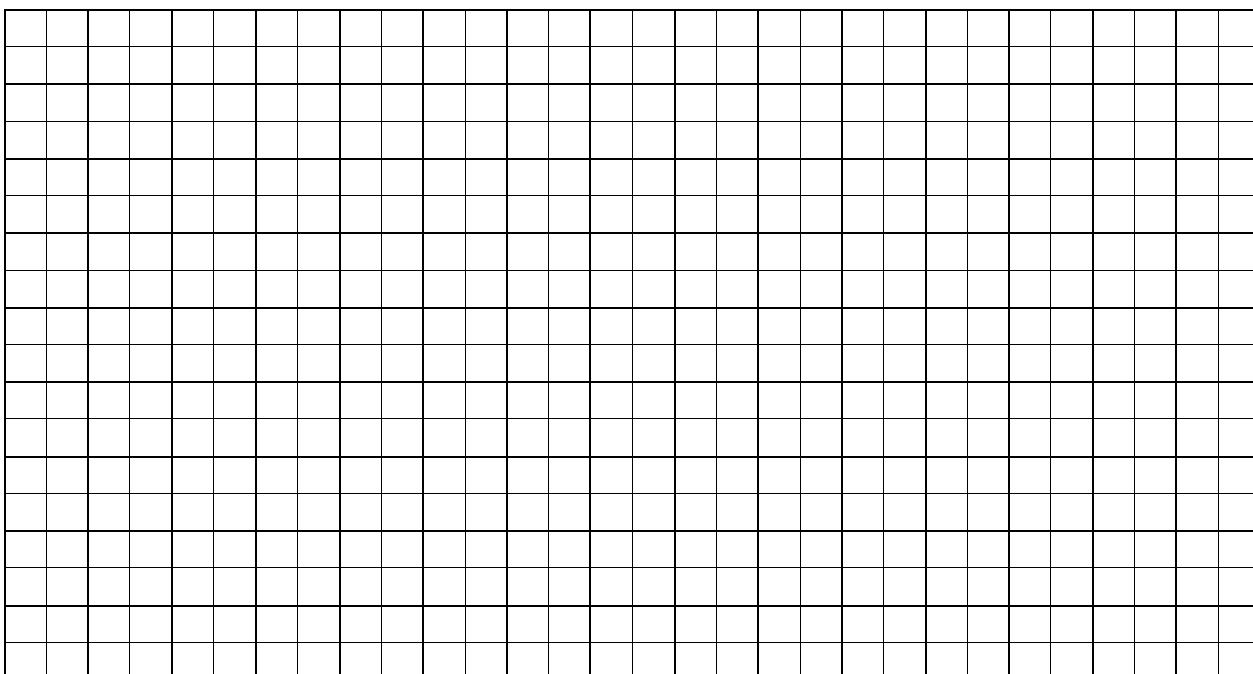
(14) The following table shows the marks of 100 pupils in Math:

Marks	10-	20-	30-	40-	50-	total
No. of pupils	15	25	30	20	10	100

(1) Draw the frequency curve for this distribution.

(2) What is the number of pupils who get 30 marks or more?

(3) What is the number of pupils who get less than 30 marks?



(1) Complete the following:

- (1) The ratio between 18 hours and one day (in the simplest form)
is :
- (2) The edge length of a cube is 0.6 dm. then its volume is cm^3
- (3) 5 kg. : 3 000 gm = : (in the simplest form)
- (4) Anything that occupies a room in the space is called
- (5) $1.45 \text{ litre} + 0.5 \text{ dm}^3 + 50 \text{ cm}^3 =$ litre
- (6) If $a : b = 2 : 3$, $b : c = 6 : 7$, then $a : c =$
- (7) 3 litres = cm^3
- (8) If $X, 18, 6, 9$ are proportional quantities, then $X =$
- (9) The ratio between the side length of the square and its perimeter
= :
- (10) If the drawing length = 2 cm. and the real length = 6 meters, then
the drawing scale equals
- (11) In quadrilaterals, the two diagonals are equal in length and
bisect each other in and
- (12) 18 kirats : 2 feddans = :
- (13) $62.5\% = \frac{\dots}{8}$
- (14) The capacity is
- (15) The volume of the cube =
- (16) Each two opposite angles are equal in measure in each of
.....,, and

- (17) If the values of a frequency distribution lie between '20 and 60',
then the range of this distribution =
- (18) The range of these set values: 29, 35, 45 and 49 equals
- (19) The two diagonals are perpendicular in each of and
- (20) If $\frac{2}{7} = \frac{4}{x}$, then $x =$
- (21) $5 \text{ cm}^3 =$ mL
- (22) The proportion is
- (23) If 78 is the greatest individual of a set and the range = 39, then
the smallest individual of this set =
- (24) 20% of 200 pounds = pounds
- (25) If the numbers 4, x, 12 and 18 are proportion, then the value
of x =
- (26) $4 \text{ m}^3 =$ dm^3
- (27) $76\% + 41\% -$ $= 100\%$
- (28) A cuboid, its volume 400 cm^3 , its length is 8 cm. and its width
is 5 cm , then its height = cm
- (29) 0.75 litre = dm^3
- (30) If the drawing scale < 1, this expresses
- (31) The volume of cube whose edge length equal the side length of
a square of perimeter 16 cm. = cm^3
- (32) 150 grammes : a quarter of kilogram = :
- (33) If two adjacent sides in a parallelogram are equal in length and
one of its angles are right, it is called

- (34) The volume of the cube which the sum of all its edge length is $36 \text{ cm} = \dots \text{ cm}^3$
- (35) The cuboid with equal dimensions is called
- (36) The ratio between number and other number = ÷
- (37) The area of the base of a cuboid is 6 cm^2 . and its height is 7 cm , then its volume = cm^3
- (38) The parallelogram became a rectangle if one of its angles was
- (39) The range = –
- (40) The volume of a cube whose area of all faces is 56 cm^2 is
- (41) The length of a cuboid of a square base if the volume 252 cm^3 and height 7cm is
- (42) The percentage is a ratio
- (43) A class has 40 pupils, if 32 of them are attendant, then the percentage of absentees = %
- (44) If a length in drawing is 2 cm. and its real length is 20 m, then the drawing scale equals :
- (45) $250 \text{ gm.} : \frac{1}{2} \text{ kg} = \dots : \dots$
- (46) The kinds of statistical data are : descriptive data and data
- (47) The length of an insect in a picture is 4 cm. and its real length is 2 millimeters , then the drawing scale is
- (48) $8200 \text{ mm}^3 = \dots \text{ cm}^3$
- (49) $\frac{13}{20} = \dots \% \quad$
- (50) The two diagonals are perpendicular in each and

(2)Choose the correct answer:

- (1) The given data are descriptive except the
(age or birth place or blood species or favorite colour)
- (2) The ratio between the perimeter of the equilateral triangle and its side length equals
(1 : 3 or 2 : 3 or 3 : 1 or 3 : 2)
- (3) The sum of measures of any two consecutive angles in the parallelogram =
(360 or 180 or 90 or 60)
- (4) If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3, then the measure for the smallest angle =
(10 or 45 or 60 or 30)
- (5) The ratio between 300 gm. And $1\frac{1}{2}$ kg = :
(1 : 2 or 1 : 5 or 1 : 10 or 1 : 30)
- (6) If $\frac{2}{5} = \frac{x}{20}$, then $x - 2 =$
(8 or 4 or 6 or 2)
- (7) If 45 % of $x = 90$, then $x =$
(200 or 100 or 300 or 20)
- (8) The opposite data are quantitative except
(Weight or age or tallness or birth place)
- m^3 (9) The volume of a cube of edge length 3 cm = c **(9)**
(8 or 27 or 64 or 125)

(10) $6\ 500 \text{ dm}^3 = \dots \text{ m}^3$

(6.5 or 65 or 605 or 650)

(11) How many bottles of 750 ml. each can be filled with 300 litre of water

(4 or 40 or 400 or 4 000)

(12) The diagonals are perpendicular and not equal in length in

(Parallelogram or rectangle or rhombus or square)

= 0.5, then $x = \dots$

$\frac{8}{x}$ (13) If

(4 or 8 or 16 or 40)

(14) The ratio between the perimeter of the rectangle and its width

the width= $\frac{3}{2}$

If the length

(1 : 5 or 1 : 3 or 5 : 1 or 3 : 1)

(15) 125 piasters: 5 pounds = : (in the simplest form)

(4 : 1 or 1 : 4 or 25 : 1 or 1 : 25)

, then its base area equals m^3 (16) The volume of a cube equals 125 c
or 5 cm) m^2 or 25 cm or 5 cm^2 (25 c

= % $\frac{4}{5}$ (17)

(50 or 60 or 70 or 80)

(18) If the ratio 7 : 13 is the same ratio $x : 52$, then $x = \dots$

(14 or 21 or 28 or 35)

(19) The number of edges of the cube is edges

(4 or 6 or 8 or 12)

(20) The centimeter cube is a unit for measuring

(The perimeter or the area or the volume or the length)

(3) In the opposite figure:

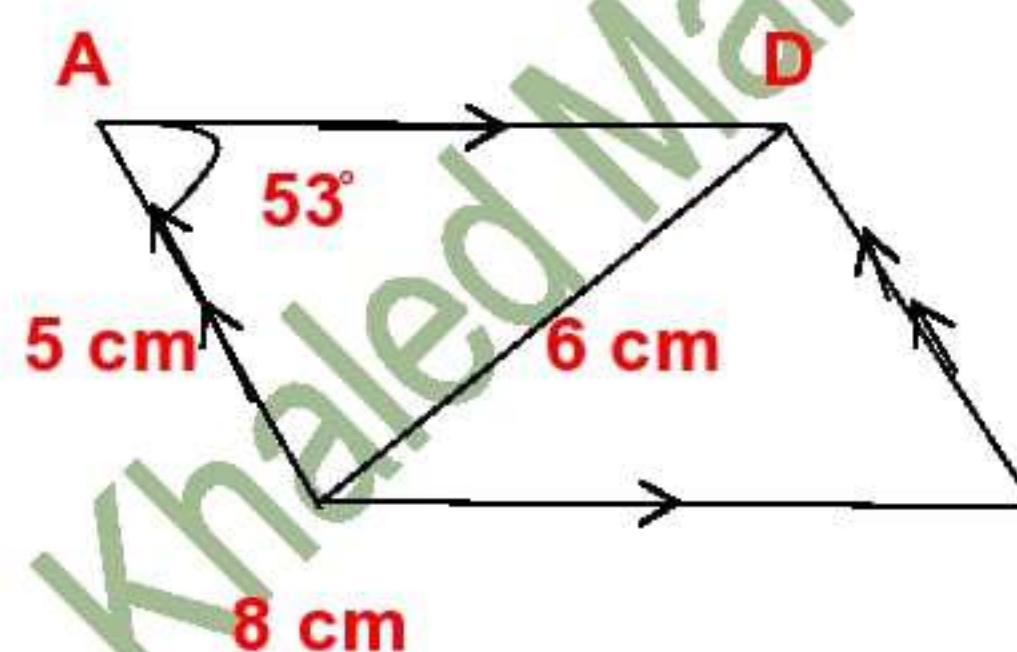
ABCD is a parallelogram,

$m(\angle BAD) = 53^\circ$, $AB = 5 \text{ cm}$,

$BC = 8 \text{ cm}$. and $BD = 6 \text{ cm}$

B

C



(1). $m(\angle BCD)$

(2) The perimeter of the triangle DBC

(4) In the opposite figure:

A rectangle, its length is 2 m,

and its width is 120 cm

Calculate:

120 cm

2 m



(1) The ratio between the width of the rectangle and its length

(2) The ratio between the length of the rectangle and its perimeter

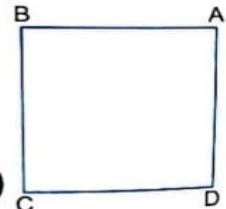
Revision for primary (6)

Part (1)

Answer the following questions :

1 Choose the correct answer from those given :

- (1) The first term in the ratio $\frac{3}{5}$ is
(8 or 3 or 5 or 15)
- (2) The ratio between the two numbers 6 : 9 is
(1:3 or 1:2 or 2:3 or 3:1)
- (3) The ratio between the two numbers 1.6 : 1.8 = :
(1:4 or 8:9 or 3:8 or 1:16)
- (4) 5 pounds : 350 piastres in the simplest form is
(10 : 7 or 5 : 350 or 50 : 350 or 7 : 5)
- (5) $\frac{2}{3} : 3 \frac{1}{3} = \dots : \dots$
(1 : 2 or 1 : 3 or 2 : 3 or 1 : 5)
- (6) The ratio between the side length of a square and its perimeter =
(1 : 3 or 2 : 4 or 1 : 4 or 2 : 3)
- (7) The ratio between the side length of an equilateral triangle and its perimeter = :
(1 : 1 or 1 : 3 or 1 : 4 or 1 : π)
- (8) If A : B = 2 : 3 and B : C = 3 : 5 , then A : C =
(3 : 5 or 2 : 3 or 2 : 5 or 6 : 9)
- (9) If a : b = 2 : 3 , b : c = 6 : 7 , then a : c =
(7 : 4 or 4 : 7 or 12 : 7 or 6 : 7)
- (10) In the opposite figure :
ABCD is a square
, then the ratio between
 $AB : CD = \dots : \dots$
(1 : 1 or 1 : 2 or 1 : 3 or 2 : 1)



- (11) $3\ 000 \text{ gm.} : 8 \text{ kg.} = \dots$
 $(3:8 \text{ or } 8:3 \text{ or } 30:8 \text{ or } 3:80)$
- (12) A car covers 240 km. in 3 hours , then the car speed is km./hour.
 $(60 \text{ or } 80 \text{ or } 120 \text{ or } 90)$
- (13) The ratio between 12 kirats and 1.25 feddan = :
 $(1:2 \text{ or } 2:1 \text{ or } 2:5 \text{ or } 5:2)$
- (14) $\frac{1}{8} \text{ day} : 6 \text{ hours} : \frac{1}{2} \text{ day} = \dots : \dots : \dots$
 $(1:2:6 \text{ or } 1:2:4 \text{ or } 1:2:3 \text{ or } 3:2:1)$
- (15) Consequent of the ratio $3 : 5$ is
 $(3 \text{ or } 5 \text{ or } 2 \text{ or } 8)$
- (16) The ratio between 18 months ,2 years is :
 $(1:9 \text{ or } 3:4 \text{ or } 10:9 \text{ or } 27:30)$
- (17) $\frac{5}{2} : \frac{2}{7} = \dots : \dots$
 $(5:7 \text{ or } 35:4 \text{ or } 2:7 \text{ or } 5:2)$
- (18) A car consumes 20 litres of petrol to cover a distance 250 km. , then the rate consumption of the car is
 $(0.08 \text{ L./km. or } 0.8 \text{ L./km. or } 8 \text{ L./km. or } 80 \text{ L./km.})$
- (19) If the ratio among the measurements of the angles of a triangle is $2 : 3 : 4$, then the measurement of the smallest angle is°
 $(40 \text{ or } 60 \text{ or } 80 \text{ or } 180)$
- (20) The ratio between the number of boys and the number of girls in a certain school is $6 : 5$, if the number of boys is 180 , then the number of girls =
 $(150 \text{ or } 30 \text{ or } 120 \text{ or } 110)$

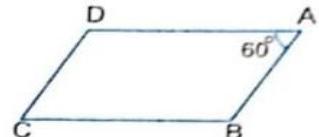
- (21) If $\frac{2}{3} = \frac{x}{9}$, then $x = \dots$ (4 or 6 or 8 or 10)
- (22) If the numbers 4 , x , 12 , 18 are proportional , then $x = \dots$ (21" (2 or 3 or 6 or 54)
- (23) The percentage is a ratio its second term is (10 or 100 or 1 000 or 10 000)
- (24) $\frac{4}{5} = \dots \%$ (20 or 40 or 50 or 80)
- (25) $1 - 25 \% = \dots \%$ (25 or 50 or 65 or 75)
- (26) In a class the percentage of girls is 46 % from the total number of pupils , then the percentage of boys = % (46 or 54 or 100 or 146)
- (27) If the drawing scale is 1 , this expresses minimization. ($>$ or $=$ or $<$ or \geq)
- (28) The numbers 1 , 2 , 6 and are proportional. (2 or 6 or 8 or 12)
- (29) 20 % of 500 = (10 or 100 or 250 or 480)
- (30) If 20 % of a number is 80 , then the number = (16 or 40 or 400 or 1 600)
- (31) If the price of some goods is L.E. 256 and the price became L.E. 192 during the discount , then the percentage of the discount equals (16 % or 25 % or 33 % or 75 %)
- (32) A man distributes L.E. 200 between two persons in the ratio 2 : 3 , then the share of the first = L.E. (20 or 30 or 80 or 120)

- (33) A trader sold some goods by losing percentage 20 % , then the percentage of the selling price was %
(20 or 80 or 100 or 120)
- (34) 20 % of a number = % of half the same number.
(10 or 20 or 30 or 40)
- (35) A merchant sold goods with profit 15 % , if the cost price 20 000 pounds , then the selling price =
(23 000 or 15 000 or 2 300 or 150)
- (36) If $\frac{x}{5} = 40\%$, then $x = \dots$
(2 or 4 or 5 or 8)
- (37) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is
(1:10 or 1:100 or 1:500 or 1:1 000)
- (38) If $\frac{2}{7} = \frac{x-3}{21}$, then $x = \dots$
(3 or 6 or 9 or 12)
- (39) If $\frac{4}{6} = \frac{8}{x}$, then $x+2 = \dots$
(16 or 15 or 14 or 12)
- (40) If Adel scored 13 marks from 20 marks in an exam , then the percentage of the scored mark =
(65 % or 13 % or 20 % or 0.65 %)

- (41) In the opposite figure :

ABCD is a parallelogram where $m(\angle A) = 60^\circ$

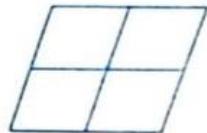
, then $m(\angle B) = \dots$



(30° or 60° or 90° or 120°)

- (42) In the opposite figure :

The number of parallelograms
which can be obtained is



(4 or 5 or 7 or 9)

- (43) The diagonals are perpendicular and equal in length in

(rectangle or square or rhombus or parallelogram)

- (44) The four sides are equal in length in

(triangle or rhombus or parallelogram or trapezium)

- (45) If one of the angles of a parallelogram is a right angle
, then it is called

(a square or a rectangle or a rhombus or a triangle)

- (46) The number of edges of the cube the number of faces of the
cuboid. ($>$ or $<$ or $=$ or \leq)

- (47) The volume of a cuboid of dimensions 7 cm., 5 cm., 2 cm. is cm³
(70 or 56 or 16 or 7 000)

- (48) If the edge length of a cube is 6 cm. , then its volume = cm³

(6 or 72 or 108 or 216)

- (49) If the volume of a cube = 125 cm³ , then its base area =

(25 cm² or 25 cm. or 5 cm² or 5 cm.)

- (50) A wooden box in the form of a cube , its external volume is $1\ 000\ \text{cm}^3$ and its capacity is $729\ \text{cm}^3$, then the volume of wood of the box = cm^3
 (0.729 or 1 729 or 271 or 729 000)
- (51) Litre = cm^3
 (10 or 100 or 1 000 or 2 000)
- (52) $0.3\ \text{m}^3$ = dm^3
 (3 000 or 300 or 30 or 3)
- (53) The sum of measures of any two consecutive angles of a parallelogram = (120 or 140 or 160 or 180)
- (54) Description of the pattern  is repetition for
 (∇ or $\nabla\Box$ or $\nabla\circ\Box$ or \circ)
- (55) If the volume of a cuboid is $400\ \text{cm}^3$ and its base with length 8 cm. and width 5 cm. , then its height = cm.
 (6 or 10 or 12 or 20)
- (56) $4.250\ \text{cm}^3$ = mm^3
 (4 250 or 42.5 or 0.425 or 4.25)
- (57) ABCD is a parallelogram if $m(\angle A) = 50^\circ$, then $m(\angle C) =$
 (50° or 70° or 130° or 60°)
- (58) 4.6 litres = mL.
 (46 or 460 or 4 600 or 46 000)
- (59) $12\ \text{dm}^3$ = litres.
 (120 or 1 200 or 12 000 or 12)
- (60) $16\ 000\ \text{cm}^3$ = litres.
 (1.6 or 16 or 160 or 0.16)

- (61) From the descriptive data is
(blood species **or** height **or** weight **or** age)
- (62) From the quantitative data is
(favorite colour **or** name **or** age **or** blood type)
- (63) is not a quantitative data.
(Favorite colour **or** Area **or** Volume **or** Length)
- (64) The following data are descriptive except
(colour **or** birth place **or** age **or** name)
- (65) All of the following data are quantitative except
(age **or** height **or** birth place **or** weight)
- (66) If the values in the frequency distribution lies between (40 , 90) , then the range of this distribution =
" (130 **or** 50 **or** 80 **or** 180)
- (67) The range of the values (3 , 8 , 2 , 5) is
(7 **or** 6 **or** zero **or** one)
- (68) The range of the values 50 , 90 , 35 and 20 is
(10 **or** 20 **or** 30 **or** 70)
- (69) If the marks of 6 students in one exam are 29 , 33 , 57 , 40 , 36 and 49 , then the range of these marks =
(32 **or** 33 **or** 28 **or** 86)
- (70) If the range is 40 and the length of the set is 5 , then the number of sets =
(5 **or** 6 **or** 7 **or** 8)

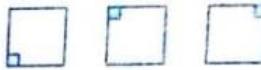
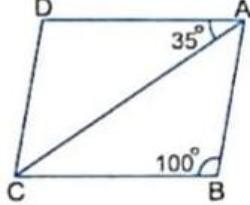
Revision for primary (6)

Part (2)

2 Complete each of the following :

- (1) When comparing between two quantities or numbers of the same type and same units the resulting fraction is called
- (2) The comparing between two quantities of different kind is
- (3) The ratio between two numbers =
- (4) The ratio between the two numbers $125 : 25$ =
(in the simplest form)
- (5) $12 : 18 : 36$ = : : (in the simplest form)
- (6) $\frac{5}{4} : 2$ = : (in the simplest form)
- (7) $\frac{1}{4} : \frac{1}{3} : \frac{1}{2}$ = : : (in the simplest form)
- (8) If the ratio $a : b = 4 : 3$ and the ratio $b : c = 2 : 3$
, then the ratio $a : b : c =$: :
- (9) Half km. : 250 metres = : (in the simplest form)
- (10) 3 weeks : 24 days = : (in the simplest form)
- (11) The ratio between child's age and his father's age is $1 : 10$ and the age of the child is 6 years , then the father's age = years.

- (12) If the sum of two numbers = 180 and the ratio between them is $2 : 7$
, then the smaller number =
- (13) An agricultural tractor ploughs 28 feddans in 4 hours , then its rate of
performance is
- (14) A computer colour printer prints 12 papers each 4 minutes , then the rate
of work of this printer = papers/minutes.
- (15) If the ratio between the two dimensions of a rectangle is $3 : 4$ and its
perimeter is 140 cm., then its area = cm^2
- (16) The proportion is
- (17) Drawing scale =
- (18) From the properties of the proportion , the product of the extremes
= the product of the
- (19) If the drawing scale > 1 , then this expresses
- (20) $1 - (15 \% + 45 \%) = \dots \% \quad$
- (21) The third proportional of the numbers : 0.8 , 4.8 and 12 is
- (22) An edific of height 12 metres , its shade at a moment was 4 metres ,
a tree is neighboured to it and its shade is 2 m. at the same moment , then
the height of the tree = m
- (23) The real length of an insect is 0.3 mm. and its length in a picture is
4.5 cm. , then the drawing scale = :

- (24) If $6, 8, 3, x$ are in proportion , then $x = \dots$
- (25) Hasnaa drew a picture for Omar with drawing scale $1 : 40$,
if the real height of Omar is 160 cm. , then the height of Omar in
the picture = cm.
- (26) The next figure in the following pattern  is
- (27)  (in the same pattern)
- (28) A rectangle will be a square if its diagonals are
- (29) In the opposite figure :
ABCD is a parallelogram
, then $m(\angle ACD) = \dots^\circ$
- 
- (30) The quadrilateral which each two opposite sides are parallel and equal in length is
- (31) If the perimeter of one face of a cube is 24 cm. , then its volume is cm^3 .
- (32) The volume of a cuboid is 64 cm^3 and the area of its base is 16 cm^2 .
, then its height = cm.
- (33) If the sum of lengths of all edges of a cube is 132 cm. , then its volume = cm^3 .

- (34) The area of the base of the cuboid =
- (35) $1.5 \text{ litre} + 0.35 \text{ dm}^3 + 150 \text{ cm}^3 = \dots \text{ cm}^3$
- (36) The diagonals are perpendicular and not equal in length in
- (37) The volume of a cuboid with a squared base of side length 6 cm. and its height is 10 cm. = cm^3
- (38) The rhombus whose one of its angles is right is called
- (39) Diagonals are equal in length in each of and
- (40) A cuboid of base area is 16 cm^2 and its height is 5 cm. , then the volume = cm^3
- (41) The types of the statistical data are
- (42) Age , birth date and weight are called data.
- (43) The difference between the maximum value and the minimum value is
- (44) The number of sets = $\frac{\text{the range}}{\dots}$
- (45) The lower limit of a set = 10 and the upper limit = 30 , then its centre =
- (46) In the following table :

Sets	10 –	20 –	30 –
Frequency	4	6	2

The centre of the set (10 –) =

- (47) The following table shows the marks of 40 students in one test , then the number of students who got less than 30 marks =

Marks	10 –	20 –	30 – 40
Number of students	10	13	17

- (48) The following table shows the marks of 50 students in one month in maths :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	5	15	20	10	50

Then the number of students whose marks are less than 40 is students.

Name :-

Grade :-

1 choose the correct answer :-

- 1) A tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans = hours . (4 , 6 , 7 , 8)
- 2) If $\frac{2}{5} = \dots : 15$ (2 , 5 , 6 , 15)
- 3) The ratio between 9 months and 3 years is (9:3 , 3:9 , 1:4 , 4:1)
- 4) $\frac{5}{4} : 3\frac{1}{4} = \dots$ (5:13 , 1:3 , 3:1 , 5:9)
- 5) The ratio between the radius of a circle and its circumference is ($2\pi:1$, $\pi:1$, $1:2\pi$, $1:4$)
- 7) 2.25 feddans : 16 kirats = (3:2 , 27:8 , 8:27 , 2:3)
- 8) If $a = \frac{1}{2}b$, $b = \frac{1}{3}c$, then $a:c = \dots$ (1:3 , 3:1 , 1:6 , 6:1)
- 9) The antecedent of the ratio $\frac{3}{7}$ is (3 , 7 , 10 , otherwise)
- 10) If $a:b = 5:6$ and $a+b=33$ then $a = \dots$ (1 , 11 , 22 , 15)

2 complete .

- 1) if $a:b = 2:1$, $b:c = 3:2$, then $a:c = \dots : \dots$
- 2) $9 : 12 : 15 = \dots : \dots : \dots$ (in the simplest form)
- 3) A factory produces 1600 lamps in 4 hours then the production rate= lamp / hour
- 4) The ratio between the perimeter of a rhombus and its side length =
- 5) $\frac{1}{4} : \frac{1}{3} : \frac{1}{2} = \dots : \dots : 6$
- 6) The ratio between two numbers is 3 : 7 , if the first number is 12 , then the second number is

- 7) The ratio $7 : 13$ is the same ratio as $x : 52$, then $x = \dots$
- 8) $0.32 : 6.4 : 8 = \dots$ (in the simplest form)
- 9) The sum of three numbers is 45 and the ratio among them is $2 : 3 : 4$, then the smallest number is \dots
- 10) $0.5 \text{ km.} : 700 \text{ m.} : 900 \text{ m.} = \dots$ (in the simplest form)

3) Find the area of the rectangle whose the perimeter is 30 cm and the ratio between its dimensions is $3 : 2$

4) A sum of money is divided between two persons in the ratio $3 : 5$ if the share of second exceeds the share of the first by L.E 30. Find the share of the first

5) If the ratio between Hany's share : Samy's share : Tarek's share is $3 : 4 : 5$ and the share of Hany was L.E 24 calculate the share of each of Samy and Tarek

6) The ratio among the lengths of the sides of a triangle is $2 : 3 : 4$, the perimeter of the triangle = 36 cm. Calculate the lengths of each side of the triangle.

Name :-

Grade :-

1 choose the correct answer :-

- 1) If an agricultural machine ploughs 14 feddans in 3.5 hours , then the rate of the performance of this machine is $(\frac{1}{4}, 2\frac{1}{2}, 4, 10\frac{1}{2})$
- 2) The ratio between the diameter of a circle and its circumference = $(\frac{\pi}{2}, \pi, \frac{1}{\pi}, 2\pi)$
- 3) If the number of boys in a class = $\frac{1}{2}$ the total number of pupils in the class , then the number of boys : the number of girls = $(1:2, 1:4, 2:1, 1:1)$
- 4) The sum of two numbers is 105 and the ratio between them is 2 : 3 , then the greater one is $(21, 42, 63, 84)$
- 5) A printer prints 15 papers in 3 minutes , then the rate of printing of this printer = Paper / min. $(5, 3, 45, 0.5)$
- 6) If $a : b = 7 : 4$ and $a - b = 15$ then $b =$ $(11, 8, 20, 35)$
- 7) $\frac{3}{5} : \frac{5}{8} =$ 25 $(24, 27, 15, 40)$
- 8) The side length of square is 6 cm , then the ratio of its perimeter to its side length = $(4, 5, \frac{1}{4}, \frac{1}{5})$
- 9) The ratio between $\frac{1}{2}$ kg . : 700 gm. = $(2:7, 5:7, 7:5, 50:7)$
- 10) If a is half of b , then $a : b =$ $(2:1, 1:2, 1:3, 3:2)$

2 complete :-

- 1) $1\frac{1}{2} : 3 : \frac{3}{5} =$
- 2) If A is twice B and B twice C then $A : c =$
- 3) the rate is

4) $\frac{0.5}{4} = 1 : \dots$

- 5) If the area of a rectangle is 32 cm^2 and its width is 4 cm , then the ratio between the length and the width =
- 6) If $A : B = 3 : 5$ and $A : C = 6 : 7$ then $A : B : C = \dots$

3) The ratio between the height of a building to that of a tree is $\frac{8}{3}$, if height of the tree is 9 m. Find the height of the building , then calculate the difference between their height

4) A rectangular piece of land , the ratio between its length to its width is 9 : 7 the difference between its length and its width is 18 m , calculate each of the length , the width and the perimeter

5) if the ratio between the heights of Mohamed and Ahmed is 3 : 2 and the ratio between that Ahmed and Hany is 5 : 4 , find the ratio between the heights of Mohamed and Hany

- 4) $\frac{2}{3}$ day : 12 hours : 240 minutes =
- 5) The ratio between the side length of rhombus and its perimeter is :
- 6) $2.5 : 5 : 0.35$ = (in simplest form)
- 7) 25 minutes : $\frac{1}{3}$ hours =

③ In one of our schools , there are 960 students , if the number of girls = $\frac{3}{5}$ the number of boys , find each of the number of boys and the number of girls .

④ The ratio between the measurements of angles in a triangle is $2 : 3 : 4$, find the measure for each angle in the triangle .

⑤ If the ratio between the ages of Basma , Hanaa and Shereen is $2 : 3 : 5$ and the difference between the ages of Hanaa and Shereen is 4 year , find the ages of each of them

⑥ An agricultural plow plough 6 feddans in 3 hours , if another one ploughs 10 feddans in 4 hours . Which of the two plows is better in performance ?

Name :-

Grade :-

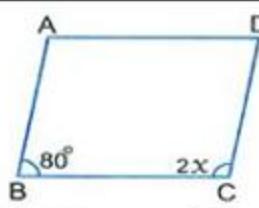
1 choose the correct answer :-

- 1) If Ahmed drinks 21 glasses of milk weekly , then the rate of what he drinks daily is glasses / day (3 , 7 , 14 , 20)
- 2) $\frac{2}{3} : 3 \frac{1}{3} = \dots$ (1:5 , 1:2 , 2:5 , 1:10)
- 3) The ratio between 3 km. : 500 m. = (6:1 , 1:6 , 5:3 , 3:5)
- 4) The ratio between the side length of an equilateral triangle and its perimeter = (3:1 , 1:3 , 1:1 , 1:4)
- 5) If the ratio between the weight of Hany and the weight of Ahmed is 5 : 6 and the weight of Ahmed is 60 kg. then the weight of Hani = Kg. (40 , 50 , 60)
- 6) If $x : y = 1 : 2$ and $y : z = 2 : 5$ then $x : z = \dots$ (1:5 , 3:5 , 5:2 , 2:5)
- 7) the ratio between the circumference of the circle and its diameter length = ($\frac{\pi}{2}$, π , $\frac{1}{\pi}$, 2π)
- 8) the ratio between 3 feddans : 40 kirats = ($\frac{9}{5}$, $\frac{5}{9}$, $\frac{3}{4}$, $\frac{4}{3}$)
- 9) $\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = \dots$ (2:3:4 , 4:3:2 , 6:4:3 , 3:4:2)
- 10) $16 : 48 = \frac{1}{\dots}$ (2 , 4 , 5 , 3)

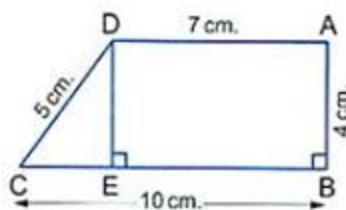
2 complete :-

- 1) $250 \text{ gm.} : \frac{1}{2} \text{ kg.} = \dots$ (in simplest form)
- 2) A factory produces 8000 juice cans in 8 hours . Then the production rate = (in simplest form)
- 3) $2.8 : 0.49 = \dots : \dots$ (in simplest form)

12	A cube , its volume is $\frac{1}{8} \text{ cm}^3$, then the perimeter of one face = Cm. $(\frac{1}{2}, 8, 2)$
13	$1.45 \text{ liters} + 0.5 \text{ dm}^3 = \dots \text{ Liters}$ $(1.5, 1.95, 1.55)$
14	
15	The sum of the edge lengths of a cube is 60 cm. , then the area of one face = cm^2 $(100, 20, 25)$
16	If one angle of the parallelogram is right and its sides are equal in length , then its called $(\text{square}, \text{rhombus}, \text{rectangle})$
17	If the perimeter of base of a cube is 20 cm. , then its volume = cm^3 $(125, 64, 8000)$
18	If the volume of a cube = 125 cm^3 , then its base area = cm^2 $(35, 25, 5)$
19	The sum of the edge lengths of a cube with volume 1 cm^3 = cm $(24, 1, 12)$
20	The ratio between two edge lengths of the cube = $(1:4, 1:1, 1:12)$
21	The liter is a unit for measuring $(\text{length}, \text{area}, \text{capacity})$
22	The sum of the lengths of five edges of a cube is 15 cm. , then its volume = cm^3 $(125, 27, 45)$
23	38 milliliters = cm^3 $(38, 38000, 0.038)$
24	$\frac{3}{4}$ litres. = $(75 \text{ mL}, 75 \text{ dm}^3, 750 \text{ cm}^3)$
25	In the opposite figure : ABCD is a parallelogram in which $m(\angle B) = 80^\circ$ and $m(\angle C) = 2x$, then the value of x in degrees = $(100 \text{ or } 80 \text{ or } 50 \text{ or } 40)$



39	ABCD is a parallelogram in which : $m(\angle A) + m(\angle C) = 120^\circ$ then $m(\angle B) = \dots$
40	The volume of cube whose base area is $9\text{ cm}^2 = \dots$
41	$3.7\text{ liters} = \dots \text{ cm}^3$, $7\text{ cm}^3 = \dots \text{ mL}$
42	If the diagonals of a parallelogram are equal then it is
43	$4.6\text{ liters} = \dots \text{ milliliters}$
44	The area of one face of a cube is 25 cm^2 , then its volume = cm^3
45	$5.4\text{ dm}^3 = \dots \text{ L}$, $2\frac{1}{2}\text{ liters} = \dots \text{ cm}^3$
46	The capacity is
47	The two diagonals are perpendicular in each of and
48	A parallelogram is a rectangle when
49	A parallelogram is a rhombus when its two diagonals are
50	The volume of the cube in which the sum of all its edge lengths is 36 $= \dots \text{ cm}^3$
51	The volume of the cube whose edge length = the side length of a square of perimeter 16 cm =
52	$3.45\text{ liters} + 0.5\text{ dm}^3 + 50\text{ cm}^3 = \dots \text{ Liters}$
53	If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then it is called
54	ABCD is a trapezium in which $m(\angle B) = 90^\circ$ $, AD = 7\text{ cm.}, AB = 4\text{ cm.}, BC = 10\text{ cm.}$ $, DC = 5\text{ cm.}$ and ABED is a rectangle , complete : [a] AB = = cm. [b] EC = cm. [c] The perimeter of the triangle DEC = cm.

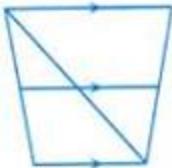


Revision Unit (3)

1 complete :-

- | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | A parallelogram is a When one of its angles is right and two adjacent sides are equal in length. |
| 2 | $1.2 \text{ m}^3 = \dots \text{ mL}$, $200\,000 \text{ mm}^3 = \dots \text{ dm}^3$ |
| 3 | A rhombus is a square if are equal in length |
| 4 | In the parallelogram XYZL if $m(\angle Y) = 70^\circ$, then $m(\angle L) = \dots$ |
| 5 | The cubic centimeter is |
| 6 | Each two opposite angles of parallelogram are |
| 7 | The sum of the measures of any two consecutive angles in the parallelogram is |
| 8 | A wooden box in the form of a cube its external volume is 1000 cm^3 . Its capacity is 729 cm^3 ., then the volume of the wood of the box = |
| 9 | The volume of the inner space of a container is $16\,000 \text{ cm}^3$., then the capacity of this container = liters |
| 10 | The shape that two diagonals are perpendicular and equal in length is |
| 11 | A rectangle is a square if |
| 12 | The four sides are equal in length in each of and |
| 13 | The two diagonals are equal in length in each of and |
| 14 | A rhombus is a parallelogram in which two adjacent sides are |
| 15 | In the parallelogram ABCD if $m(\angle A) = 70^\circ$, then $m(\angle B) = \dots$ |
| 16 | $1\,200 \text{ cm}^3 = \dots \text{ Liters}$, $5.6 \text{ dm}^3 = \dots \text{ mL}$ |
| 17 | The rhombus whose one of its angles is right is called |
| 18 | The 4 angles are right in each and |
| 19 | The capacity of a tin is 4 liters , then the inner volume of this tin = dm^3 |
| 20 | The volume of cube = X X |

26	The base of a cuboid is a square , its volume is $2\ 000 \text{ cm}^3$. And its height is 5 cm. , then the side length of its base is cm (100 , 20 , 10)
27	In the opposite figure :- The number of trapezoids is (2 , 4 , 2 , 5)

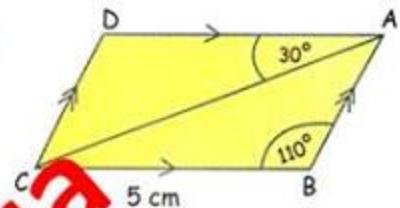


Mr . Gamal ElSagqa
01020144136
السراج التعليمي
بجامعة التعليم المصري
Tanta

- 21 The cuboid has faces , each face is a And each two opposite faces are In area
- 22 If the total area of a cube = 24 cm^2 . , then its volume = cm^3
- 23 The number of vertices of the cube is
- 24 If the volume of a cuboid is 27 cm^3 and its height is 3 cm. , then the area of its base = cm^2
- 25 $2 \text{ m}^3 = \dots \text{ dm}^3$, $0.5 \text{ cm}^3 = \dots \text{ mm}^3$
- 26 If the edge length of a cube is 3 cm. , then its volume is cm^3
- 27 $1 \text{ dm}^3 = \dots \text{ cm}^3$, $10 \text{ cm}^3 = \dots \text{l}$
- 28 If the dimensions of a cuboid are equal , then it is called a
- 29 The volume of the cuboid = X
- 30 The volume of the cuboid with base area 150 cm^2 and height 10 cm. is
- 31 A cuboid with a square base of side length 6 cm. and height 10 cm. , then its volume is
- 32 The cubic centimeter is
- 33 The volume of the cuboid whose dimensions are 2 cm. , 3 cm. and 5 cm. = cm^3
- 34 If the volume of a cuboid is 64 cm^3 . And the area of its base is 16 cm^2 . Then its height = Cm.
- 35 The cube is a cuboid with dimensions
- 36 The edge length of a cube is 0.6 dm. , then its volume = cm^3
- 37 If the perimeter of one face of a cube is 8 cm. , then its volume = cm^3
- 38 If the capacity of a vessel on the shape of a cube internally = $\frac{1}{8}$ liter , then the edge length of the cube = Cm

55

The opposite figure shows a parallelogram in which:
 $m(\angle B) = 110^\circ$, $m(\angle DAC) = 30^\circ$ and $BC = 5 \text{ cm}$.



Find:

- a) $m(\angle D)$.
- b) $m(\angle BAC)$.
- c) $m(\angle ACD)$.

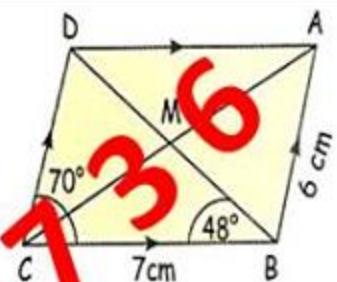
56

$ABCD$ is a parallelogram

in which: $AB = 6 \text{ cm}$, $BC = 7 \text{ cm}$, $BH = 3.8 \text{ cm}$,

$m(\angle C) = 70^\circ$ and $m(\angle DBC) = 48^\circ$.

Find: $m(\angle ABD)$ and the perimeter of $\triangle BCD$.



57

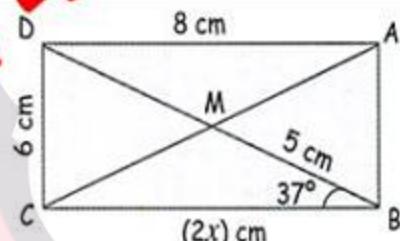
If $ABCD$ is a rectangle:

a) $AB = \dots \text{ cm}$. b) $BC = \dots = \dots \text{ cm}$.

c) The value of $x = \dots$.

d) $AC = \dots \text{ cm}$. e) $m(\angle CDB) = \dots^\circ$.

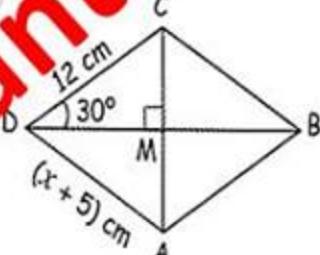
f) The type of $\triangle MBC$ according to its side length is



58

$ABCD$ is a rhombus in which $DC = 12 \text{ cm}$, $DA = (x + 5) \text{ cm}$ and $m(\angle BDC) = 30^\circ$. find:

- a) The value of x .
- b) $m(\angle MCD)$.
- c) The perimeter of the rhombus $ABCD$.



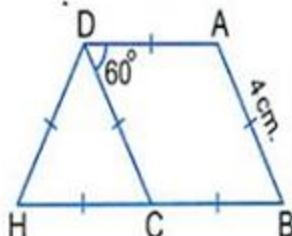
59

$ABCD$ is a rhombus such that
 $m(\angle ADC) = 60^\circ$, $AB = 4 \text{ cm}$,
, DCH is an equilateral triangle

Find : [a] $m(\angle B)$, $m(\angle A)$

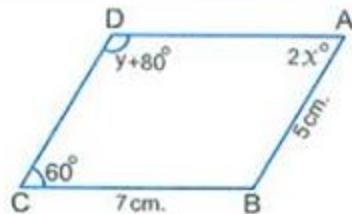
[b] The length of \overline{BC}

[c] The perimeter of the trapezium $ABHD$



60

- ABCD is a parallelogram having
 $AB = 5 \text{ cm.}$, $BC = 7 \text{ cm.}$ and $m(\angle C) = 60^\circ$
Calculate :
 [a] The value of each of x and y
 [b] The perimeter of the parallelogram ABCD



2 choose the correct answer :-

- 1 A cuboid of dimensions 8 cm., 6 cm. and 12 cm. then its volume is cm^3 (500, 567, 576)
- 2 ABCD is a parallelogram, then $m(\angle A) + m(\angle B) = \dots^\circ$ (108, 90, 180)
- 3 $1.7 \text{ L.} = \dots \text{ mL}$ (17, 170, 1700)
- 4 The two diagonals are perpendicular and not equal in length in the (square, rectangle, rhombus)
- 5 The two diagonals are perpendicular and equal in length in the (rectangle, square, rhombus)
- 6 The two diagonals are equal in length and not perpendicular in the (rectangle, rhombus, square)
- 7 The volume of the cube of edge length 0.1 dm. = cm^3 (0.001, 1000, 1)
- 8 The parallelogram in which two adjacent sides are equal in length is called (a square, a rhombus, a rectangle)
- 9 If the edge length of a cube is 9 cm., then the sum of the lengths of its edges in meter = (0.72, 0.9, 1.08)
- 10 The volume of a cuboid = 400 cm^3 and its base is with length = 8 cm. and width = 5 cm., then its height = Cm. (50, 80, 10)
- 11 The volume of a cuboid is 54 cm^3 , its base is squared – shaped of side length 3 cm ., then its height = Cm. (42, 6, 8.5)

EXAM (1)

صل على
رسول الله

① Answer the following questions :-

1	$0.32 : 6.4 : 8 = \dots\dots\dots\dots$	(in the simplest form)
2	If the drawing scale < 1 , then this expresses	
3	The ratio between the side length of rhombus and its perimeter is :	
4	if $a:b = 2:1$, $b:c = 3:2$, then $a:c = \dots\dots:\dots\dots$	
5	The sum of three numbers is 45 and the ratio among them is $2:3:4$, then the smallest number is	
6	the rate is	
7	$25 \text{ minutes} : \frac{1}{3} \text{ hours} = \dots\dots\dots\dots$	
8	If x , 18 , 6 and 9 are proportional then $x = \dots\dots\dots\dots$	
9	If $\frac{x+5}{3} = 7$ then $x = \dots\dots\dots\dots$	
10	$1 - (39\% + 0.21) = \dots\dots\dots\dots\%$	
11	the ratio between the circumference of the circle and its diameter length = ($\frac{\pi}{2}$, π , $\frac{1}{\pi}$, 2π)	
12	If Ahmed drinks 21 glasses of milk weekly , then the rate of what he drinks daily is glasses / day (3 , 7 , 14 , 20)	
13	$\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = \dots\dots\dots\dots$ (2:3:4 , 4:3:2 , 6:4:3)	
14	2.25 feddans : 16 kirates = (3:2 , 27:8 , 8:27 , 2:3)	
15	If the drawing length is 3 cm. and the real length is 18 m , then the drawing scale is = (1:60 , 1:600 , 1:6000 , 1:600000)	
16	If $\frac{x}{9} = \frac{4}{3}$, then $x + 2 = \dots\dots\dots\dots$ (12 , 14 , 16 , 20)	
17	A car consumes 20 litres of Benzine for covering 210 km. how many litres of Benzine does the car consumes to cover 630 km.? (60 , 120 , 80 , 100)	
18	$\frac{2}{3} : 3\frac{1}{3} = \dots\dots\dots\dots$ (1:5 , 1:2 , 2:5 , 1:10)	

19

In a school , there are 480 students if the number of girls = $\frac{5}{7}$ the number of boys .

Find the number of boys and the number of girls in the school

صل على
رسول الله

20

The perimeter of rectangle equals 140 cm , and the ratio between its dimensions 3 : 4 calculate its area

21

A sum of money is divided between two persons in the ratio 3 : 5 if the share of the second exceeds the share of the first by L.E 30 Find the share of first

22

Hamdy , Ahmed and Gamal shared in trade , Hamdy paid L.E 1 500 , Ahmed paid L.E 2 000 and Gamal paid L.E2500 , at the end of the year the profit was L.E 1 200 Find the share of each of them from the profit

- 23 the height of the building of a primary school is 14 m. , if the length of the shadow of the building at a moment is 7 m . Find the height of a tree if its shadow at the same moment is 3 m.

صل على
رسول الله

- 24 If the ratio between the measures of two acute angles in a right angled triangle is 7 : 11 Find the measure of each of them

- 25 A photo was taken for an insect by enlargement ratio 100:1 , if the real length is 0.8 cm. Find the length in the picture

اللهم صل وسلام وبارك على سيدنا ونبينا وحبيبا
وقادينا وشفيعنا وقرة عيوننا رسول الله

EXAM (2)

صل على
رسول الله

① Answer the following questions :-

- 1 A tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is hours
- 2 The percentage is a ratio whose second term is
- 3 The ratio between the measures of angles of triangle is $3 : 4 : 5$, then the measure of the smallest angle is °
- 4 If the distance between two cities on a map is 3 cm. and the real distance between them is 9 Km. , then the drawing scale of the map = :
- 5 if $\frac{3}{7} = \frac{x}{35}$, then $x + 2 =$
- 6 $\frac{4}{10} =$ %
- 7 If the drawing scale > 1 , then this expresses
- 8 if $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C =$
- 9 The ratio between 250 piasters , $7\frac{1}{2}$ pounds =
- 10 If the ratio between the two dimensions of rectangle is $3 : 4$ and its perimeter is 140 cm. , then its area = cm^2
- 11 If a is half b , and b is twice C , then $A : C =$
(1:1 , 1:2 , 1:4 , 2:1)
- 12 If 20 % of a number is 80 , then the number = (16 , 40 , 400 , 1600)
- 13 if $\frac{x-1}{10} = 0.7$, then $x =$ (7 , 8 , 10 , 9)
- 14 25 % from 200 = (20 , 40 , 50 , 100)
- 15 In the proportion , the product of the extremes the product the means
(< , > , = , ≠)
- 16 In a class the percentage of the number of girls is 54 % , then the percentage of the number of boys is %
(56 , 64 , 46 , 36)

17

A map is drawn with scale $1 : 600\,000$, if the distance between two cities on the map is 4 cm , find the real distance between the two cities in kilometers

صل على
رسول الله

18

If the ratio between the length of two pieces of cloth is $6 : 8$ and the sum of their lengths is 126 cm. , Calculate the length of each piece

19

Two persons started a commercial business , the first paid 5000 pounds and the second paid 8000 , at the end of the year the net profit was 3900 , Calculate the share of each of them from the profit

20

A car covers 300 Km. in 4 hours and another car covers 65 Km. in 50 minutes , Which of the two cars is faster ?

الله يعطيك العافية

21 If the ratio between child age and his father age is $2 : 13$, if the age of child is 6 years . Find his fathers age

..... |

22 If the ratio between the measures of angles of a triangle is $5 : 6 : 7$ and the measure of the first angle is 50° . Find the measure of the other two angles

..... |

23 If 100 grams from a food stuff gives 300 calories .how many calories will be given from 30 grams of this food.

..... |

اللهم صل وسلم وبارك على سيدنا ونبينا وحبيبنا
وقادتنا وشفيعنا وقرة عيوننا رسول الله

EXAM (3)

1 Answer the following questions :-

1	Hassan spends L.E 45 within three days , then the rate = L.E / day (12 , 13 , 14 , 15)
2	In one of the classes the number of boys is 15 and the number of girls is 20 pupils , then the ratio between number of boys and the number of girls = : (1:4 , 1:2 , 1:3 , 3:4)
3	75 % = ($\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{5}{3}$)
4	If the real length is 6 m. and the drawing length is 6 cm. Then the drawing scale Is (1:10 , 1:100 , 1:500 , 1:1000)
5	Ahmed bought a car for L.E 50 000 and sold it by profit 10 %, then the selling price = L.E (45 000 , 55 000 , 75 000 , 2 000)
6	If the drawing scale 1 , this expresses maximization (< , > , =)
7	$1 - (35\% + 25\%) =$ ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{5}$, $\frac{3}{4}$)
8	$\frac{1}{4} : \frac{1}{3} = :$ (1:4 , 1:3 , 3:4 , 4:3)
9	If Adel scored 13 marks from 20 marks in an exam , then the percentage of the scored mark = (65 % , 13 % , 20 % , 0.65 %)
10	if $\frac{2}{7} = \frac{x-3}{21}$, then $x =$ (6 , 9 , 12 , 3)
11	If $3a = 4b$, then $\frac{a}{b} =$ ($\frac{3}{4}$, $\frac{2}{3}$, $\frac{4}{3}$, $\frac{3}{2}$)
12	If the ratio 7 : 13 is the same ratio $x : 52$, then $x =$ (14 , 21 , 28 , 35)
13	If $a : b = 50\%$ and $b : c = 2 : 3$ then $a : c =$ (1:2 , 2:3 , 1:3 , 3:1)
14	30 % of a number equals its (one third , three tenths , , three fifths , three sevenths.)
15	$28\% + = 1$
16	2.5 feddans : 18 Kirats = :
17	The comparing between two quantities of different kind is
18	$250\ gm : \frac{1}{2}\ Kg = :$ (in the simplest form)
19	if $\frac{5}{x} = \frac{10}{14}$, then $x + 2 =$
20	if the buying price of some goods is L.E 2 000 and it sold for L.E 1 800 then the percentage of loss is %

- 21 A father distributed L.E 6 300 among his three sons. The share of the first was
Third the sum and the ratio between the share of the second and the third was
 $2 : 3$, Find the share of each one

.....
.....
.....
.....

- 22 There are 650 student in the school 86% of them succeeded Find the number of
failed students.

.....
.....
.....

- 23 Find the cost price of goods sold for 21 275 pounds with profit percentage 15 %

.....
.....
.....

- 24 An auto fair owner bought a car for L.E 45 000 , then he spent L.E 5 000 for
repairing it , then he sold it for L.E 55 000 Calculate :
(a) The profit after selling
(b) The percentage of profit

.....
.....
.....
.....

- 25 A sum of money is distributed among three persons . The ratio of the share of each of them is $2 : 3 : 4$ and the share of the third increase the share of the first by L.E 15
What is the share of each one from the money

.....
.....
.....
.....

- 26 A fruit seller bought an amount of oranges for L.E 720 , after offering it for selling he found a part of it became bad. Then he sold the reminder for L.E 630 Find the percentage of his loss

.....
.....
.....
.....

- 27 A company for selling the electric sets. It sells a TV set for L.E 2 100 if the percentage of the profit of this company is 12 % Find the buying price of the TV

.....
.....
.....
.....

اللهم صل وسلم وبارك على سيدنا ونبينا وحبيبنا
وقادتنا وشفيعنا وقرة عيوننا رسول الله

EXAM (4)

1	If $\frac{2}{5} = \frac{x}{15}$, then $x - 1 = \dots$	(2 , 4 , 5 , 6)
2	The ratio between the side length of an equilateral triangle and its perimeter = \dots	(3:1 , 1:3 , 1:2 , 2:1)
3	If $a:b = 2:5$ and $\frac{b}{c} = \frac{5}{7}$, then $a:c = \dots$	(5:2 , 2:7 , 7:5 , 7:2)
4	The sum of measures of any two consecutive angles in a parallelogram = \dots °	(90 , 180 , 270 , 360)
5	The percentage is a ratio which its second term is \dots	(10 , 100 , 1000)
6	$\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = \dots$	(2:3:4 , 4:3:2 , 6:4:3 , 3:4:2)
7	If $\frac{6}{x+5} = 75\%$, then $x = \dots$	(30 , 3 , 0.3 , 0.03)
8	The ratio between 9 months and 3 years is \dots	(9:3 , 3:9 , 1:4 , 4:1)
9	If the price of some goods is L.E 300 and if the price became L.E 201 during the discount, then the percentage of the discount = \dots %	(16 , 75 , 33 , 25)
10	$\frac{1}{8}$ day : 6 hours : $\frac{1}{2}$ day = \dots	(1:2:6 , 1:2:4 , 1:2:3 , 3:2:1)
11	The diagonals are perpendicular in \dots	(rectangle , trapezoid , rhombus , parallelogram)
12	$\frac{24}{5} = \dots$	($4\frac{1}{5}$, $3\frac{1}{5}$, $4\frac{4}{5}$, $2\frac{2}{5}$)
13	45% of $x = 90$, then $x = \dots$	(20 , 100 , 200 , 300)
14	If $10A , 2 , 2A , B$ are proportional then $B = \dots$	(0.2 , 0.4 , 0.5 , 0.3)
15	25% of 1000 = 50% of \dots	(2000 , 1500 , 1250 , 500)
16	From the properties of the proportion, the product of the means = the product of the \dots	
17	\dots % of 240 = 60	
18	If one angle of a parallelogram is right angle, and has two adjacent sides are equal in length, then it is called \dots	
19	$32\% + 27\% + \dots \% = 1$	
20	If $3 , x - 1 , 4$ and 8 are proportion, then $x = \dots$	

- 21 Three persons started a commercial business for flowers . The first paid L.E 9 000 , the second paid L.E 5 400 and the third paid L.E 7 200 at the end of the year , the profit was L.E 1 800 Find the profit of each one

.....
.....
.....
.....
.....

- 22 ABC is a triangle in which $m(\angle A) = \frac{2}{3} m(\angle B)$ and $m(\angle C) = 2 m(\angle A)$ Find the measure of each angle .

.....
.....
.....
.....
.....

- 23 A man deposited L.E 20 000 in a bank with annual interest 8 % Find the total amount which he gets at the end of one year .

.....
.....
.....
.....
.....

- 24 A shopkeeper bought some goods for L.E 4 500 He spent L.E 500 to transport them . He sold these goods for L.E 6 250 Find the percentage of his profit .

.....
.....
.....
.....
.....

- 25 Khaled bought a flat for L.E 150 000 after selling it , he found that the percentage of his loss was 5 % Calculate the selling price of the flat

.....
.....
.....
.....

.....
.....
.....
.....

- 26 A man sold a satellite dish with a profit of L.E 1 800 , if his percentage of profit is 22.5 % Find the selling price of this dish

.....
.....
.....
.....

.....
.....
.....
.....

- 27 A discount 20 % was made for the price of a book , its price became L.E 12 what was its price before the discount

.....
.....
.....
.....

.....
.....
.....
.....

اللهم صل وسلم وبارك على سيدنا ونبينا وحبيبا
وقادنا وشفينا وقرة عيوننا رسول الله

ANSWER SHEET

Exam (1)

Exam (2)

- 1) 1 : 20 : 25
- 2) Minimization
- 3) 1 : 4
- 4) 3 : 1
- 5) 10
- 6)
- 7) 5 : 4
- 8) 12
- 9) 16
- 10) $40\% = \frac{2}{5}$
- 11) π
- 12) 3
- 13) 6 : 4 : 3
- 14) 27 : 8
- 15) 1 : 600
- 16) 14
- 17) 60
- 18) 1 : 5
- 19) No. of girls = 200
no. of boys = 280
- 20) 1st dimension = 30 cm.
2nd dimension = 40 cm.
area of rectangle = 1200 cm^2
- 21) Share of first = 45
- 22) First = 300 pounds
Second = 400 pounds
Thirds = 500 pounds
- 23) Height of tree = 6 m.
- 24) 1st angle = 35°
2nd angle = 55°
- 25) Length in picture = 80 cm.
= 8 mm.

- 1) 6
- 2) 100
- 3) 45
- 4) 1 : 300 000
- 5) 17
- 6) 40
- 7) Enlargement
- 8) 2 : 5
- 9) 1 : 3
- 10) 1200
- 11) 1 : 1
- 12) 400
- 13) 8
- 14) 50
- 15) =
- 16) 46
- 17) 24 km
- 18) 1st = 54 cm
2nd = 72 cm.
- 19) 1st = 1500 pounds
2nd = 2400 pounds
- 20) Speed of first = 1.25 km / hr
Speed of second = 1.3 km / hr
Second car is faster than first
- 21) Fathers age = 39 years
- 22) 2nd angle = 60°
3rd angle = 70°
- 23) no. of calories = 90 cal.

اللهم صل وسلم وبارك على سيدنا ونبينا وحبيبنا
وقادتنا وشفيعنا وقرة عيوننا رسول الله

Exam (3)

- 1) 15
- 2) $3 : 4$
- 3) $\frac{3}{4}$
- 4) $1 : 100$
- 5) 55000
- 6) $>$
- 7) $\frac{2}{5}$
- 8) $3 : 4$
- 9) 65 %
- 10) 9
- 11) $\frac{4}{3}$
- 12) 28
- 13) $1 : 3$
- 14) Three tenth
- 15) 0.72
- 16) $10 : 3$
- 17) Rate
- 18) $1 : 2$
- 19) 9
- 20) 20
- 21) Share of 1st = 2100 pounds
Share of 2nd = 1680 pounds
Share of 3rd = 2520 pounds
- 22) No. of failed student = 91
- 23) Cost price = 18500 pounds
- 24) Profit = 5000
percentage of profit = 10 %
- 25) First = 15 pounds
Second = 22.5 pounds
Third = 30 pounds
- 26) Percentage of loss = 12.5 %
- 27) Cost price = 1875 pounds

Exam (4)

- 1) 5
- 2) $1 : 3$
- 3) $2 : 7$
- 4) 180
- 5) 100
- 6) $6 : 4 : 3$
- 7) 3
- 8) $1 : 4$
- 9) 33
- 10) $1 : 2 : 4$
- 11) Rhombus
- 12) $4\frac{4}{5}$
- 13) 200
- 14) 0.4
- 15) 500
- 16) Extremes
- 17) 25
- 18) Square
- 19) 41
- 20) 7
- 21) Profit of first = 750 pounds
Profit of second = 450 pounds
Profit of third = 600 pounds
- 22) 1st angle = 40
2nd angle = 60
3rd angle = 80
- 23) he gets = 21600 pounds
- 24) percentage of profit = 25 %
- 25) Selling price = 142500 pounds
- 26) Selling price = 9800 pounds
- 27) The price before discount = 15 pounds

اللهم صل وسلم وبارك على سيدنا ونبينا وحبيبنا
وقادينا وشفيعنا وقرة عيوننا رسول الله

Rules

- 1) The perimeter of square = side length \times 4 = $S \times 4$
- 2) The area of square = side length \times itself = $S \times S$
- 3) The perimeter of rectangle = (length + width) \times 2 = (L + W) \times 2
- 4) The area of rectangle = length \times width = L \times W
- 5) The perimeter of triangle = sum of its side length
- 6) The area of triangle = $\frac{1}{2} \times \text{base} \times \text{height}$ = $\frac{1}{2} \times b \times h$
- 7) The area of parallelogram = base \times height = b \times h
- 8) The area of rhombus = side length \times height = L \times h
- 9) Volume of cube = edge length \times itself \times itself = $S \times S \times S$
- 10) Volume of cuboid = length \times width \times height = L \times W \times H
- 11) Volume of cuboid = base area \times height
- 12) height = $\frac{\text{Volume}}{\text{B. A}}$
- 13) height = $\frac{\text{Volume}}{\text{L} \times \text{W}}$
- 14) Range = max - min = Large - Small
- 15) Min = Max - Range
- 16) Max = Range - Min
- 17) Centre = $\frac{\text{Upper} + \text{Lower}}{2}$
- 18) no. of sets = range \div length of set
- 19) bought & spent means C . P. , Sold means S . P .
- 20) Percentage of amount = $\frac{\text{The amount}}{\text{Total}} \times 100$

Definitions

- 1) The ratio is a method to compare between two numbers has the same units
- 2) The rate is the ratio between two quantities of different kind
- 3) The percentage is a ratio its second term is 100
- 4) The product of extremes = the product of means
- 5) Drawing scale = length in drawing : length in reality
- 6) If the drawing scale > 1 then called enlargement or magnification
- 7) If the drawing scale < 1 then called reduction or minimization
- 8) The following words means difference
more than , less than , exceeds , increase , decrease
smaller than , bigger than , shorter than , longer than
- 9) The ratio between side length of a square and its perimeter = 1: 4
- 10) The ratio between side length of rhombus and its perimeter = 1: 4
- 11) The ratio between sides of equilateral triangle and its perimeter = 1: 3
- 12) The sum of measure of interior angles of triangle = 180°
- 13) There are two kinds of data: descriptive and quantitative data
- 14) Descriptive data like name, stage, colour , blood type , nationality
- 15) Quantitative data like age, volume , tallness , length
- 16) The difference between maximum and minimum is called the range
- 17) The difference between upper limit and lower limit of the set is called the length of this set
- 18) Number of sets = range \div the length of set
- 19) Range = max – min & Min = Max - Range & Max = Range + Min

Geometry

The parallelogram

- 1) Each two opposite sides are parallel and equal in length
- 2) Each two opposite angles are equal in measure
- 3) The two diagonals bisect each other
- 4) The sum of measure of each two consecutive angles is 180

The rectangle

- 1) Has 4 right angles
- 2) The two diagonals are equal in length and bisect each other
- 3) Each two opposite sides are equal in length

The rhombus

- 1) Has 4 sides equal in length
- 2) The two diagonals are perpendicular and bisect each other

The square

- 1) Has 4 right angles
- 2) Has 4 sides equal in length
- 3) The two diagonals are equal, perpendicular and bisect each other

The cuboids

- 1) Has 6 faces each of them is rectangle
- 2) Has 12 edges, 8 vertices and 3dimensions (L ,W , H)
- 3) Each two opposite faces are parallel and equal

The cube

- 1) Has 6 faces each of them is square
- 2) Has 12 edges equal in length and 8 vertices
- 3) Each two opposite faces are parallel and equal

Notes

- 1) The parallelogram with one right angle is called rectangle
- 2) The parallelogram with two diagonals are equal in length is called rectangle
- 3) The parallelogram with two diagonals are perpendicular is called rhombus

Final Revision

Grade 6

- 4) The parallelogram with two adjacent sides are equal in length is called rhombus
- 5) The parallelogram with two diagonals are perpendicular and equal in length is called square
- 6) The parallelogram with one right angle and its diagonals are perpendicular is called square
- 7) The parallelogram with one right angle and two adjacent sides are equal in length is called square
- 8) The parallelogram with two diagonals are equal in length and two adjacent sides are equal in length is called square.
- 9) The square is rhombus with one right angle
- 10) The square is rectangle with two adjacent sides is equal in length
- 11) The rectangle is parallelogram with one right angle
- 12) The rhombus is parallelogram with two adjacent sides is equal in length
- 13) Trapezium is quadrilateral has only two sides are parallel

1) If you have Sum of edges (Divide by 12) you get edge length

The volume of the cube which the sum of all its edge

lengths 36 cm. = cm³

$$S = 36 / 12 = 3 \text{ cm} \longrightarrow V = S \times S \times S = 3 \times 3 \times 3 = 27 \text{ cm}^3$$

2) If you have Perimeter of one face (Divide by 4) you get edge length

3) if you have (The Number) at the end of question
if you have (how many) at the beginning of question

$$\text{Find Volume 1 \& Find Volume 2 \& Number} = \frac{V_{(\text{large})}}{V_{(\text{small})}}$$

A sweet case in the shape of a cuboid , its internal dimensions 21 cm. , 18 cm. and 6 cm. , it is wanted to fill it with pieces of chocolate each of them is a cuboid of dimensions 3 cm. , 3 cm. and 1 cm. **Calculate the number of pieces of chocolate which fill the case completely.**

$$V1 = 21 \times 18 \times 6 = 2268 \quad \& \quad V2 = 3 \times 3 \times 1 = 9 \quad \text{No} = \frac{2268}{9} = 225 \text{ pieces}$$

Important Questions From School

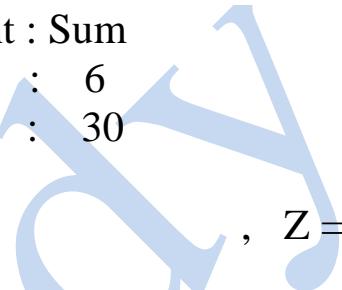
Page 24

(1) In an exam of mathematics in one class the ratio among the weak pupils to those who succeeded to the excellent pupils was $1 : 4 : 1$, If the number of all pupils in the class was 30 pupils. Calculate the number of succeeded pupils and the number of weak pupils.

Weak : Succeeded : Excellent : Sum

$$\begin{array}{r} 1 \\ \times \\ \hline y \end{array} \quad \begin{array}{r} 4 \\ : \\ y \end{array} \quad \begin{array}{r} 1 \\ : \\ z \end{array} \quad \begin{array}{r} 6 \\ : \\ 30 \end{array}$$

$$X = , \quad Y =$$



(2) The ratio between the lengths of the sides of a triangle is $2 : 3 : 4$. If the perimeter of the triangle is 54 cm, find the length of each side of the triangle.

First : Second : Third : Sum

$$\begin{array}{r} 2 \\ : \\ x \end{array} \quad \begin{array}{r} 3 \\ : \\ y \end{array} \quad \begin{array}{r} 4 \\ : \\ z \end{array} \quad \begin{array}{r} 9 \\ : \\ 54 \end{array}$$

$$X = , \quad Y = , \quad Z =$$

Page 37

4 If the distance between two cities on a map is 3 cm, and the real distance between them is 9 km. Find the drawing scale of the map Then

If the distance between two cities on the same map is 5 cm. calculate the real distance between the two cities.

Length in D :	Length in R
3 :	$9 \times 100\,000$
3 :	$9\,00\,000$
1 :	$300\,000$

Length in D :	Length in R
1 :	$300\,000$
5 :	x

$$X = \frac{5 \times 300\,000}{1} = 15\,00\,000 \text{ cm} = 15 \text{ km}$$

7 If the length of the suez canal on a map of drawing scale 1:1100000 is 15cm find its real length in kilometers.

Page 42

- 3** A father distributes LE 225 among his three sons. The share of the first was third of the sum and the ratio between the share of the second and the share of the third was 2:3. Find the share of each them.

The share of first = $225 / 3 =$ L.E 75

The remainder = $225 - 75 =$ L. E 150

$$\begin{array}{rcl} \text{Second} & : & \text{Third} & : \text{Sum} \\ 2 & : & 3 & : 5 \\ x & : & y & : 150 \\ X = & , Y = & \end{array}$$

Page 51

- 2** Khaled bought a flat for LE 150000. He sold it at 5% loss. calculate the selling price of the flat.

$$\begin{array}{rcl} \text{C.P.} & : & \text{Loss} & : \text{S.P} \\ 100\% & : & 5\% & : 95\% \\ 150000 & : & x & : y \\ \text{S.P.} = \text{L.E} & & \end{array}$$

- 5** If the cost price of a set of electric appliances is LE 72000 and it is sold at 12% profit, calculate the selling price.

Page 52 , 107

- 5** two persons started a commercial business the first paid LE 5000 and the second paid LE 8000. At the end of the year the profit was LE 3900. Calculate the share of each of them from the profit .

$$\begin{array}{rcl} \text{First} & : & \text{Second} & : \text{Sum} \\ 5000 & : & 8000 & : (\div 1000) \\ 5 & : & 8 & : 13 \\ x & : & y & : 3900 \end{array}$$

$$X = , Y =$$

- (2) A wooden box in the form of a Cube, its external volume is 1000 cm^3 . its capacity is 729 cm^3 , then the volume of the wood of the box = cm^3 .

$$\text{Volume} = 1000 - 729 = 271 \text{ cm}^3 \quad \text{Page 108}$$

Page 77

A metallic cube of edge length 9cm It needs to be converted into ingots in the shape of cuboids each of them has the dimensions 3, 3 and 1cm. calculate the number of ingots that are obtained.

Solution

The volume of the metallic cube

$$= 9 \times 9 \times 9 = 729 \text{ cm}^3$$

$$\text{The volume of one ingot} = 3 \times 3 \times 1 = 9 \text{ cm}^3$$

* The number of the obtained ingots

= the volume of the metallic cube/ the volume of one ingot

$$= \frac{729}{9} = 81 \text{ ingots}$$

Page 107

- (a) A contains has 12 litres of oil, it is wanted to put it in small bottles the Capacity of each of them is 400 cm³. Calculate the number of bottles which needed .
- (b) If the buying price of electric sets is LE 72 000 and sold at 12% profit, Calculate the selling price.

a) $V_1 = 12 \times 1000 = 12000 \text{ cm}^3$

$V_2 = 400 \text{ cm}^3$

Number = $\frac{12000}{400} = 30 \text{ b}$

b) C . P . : Profit : S . P
 100% : 12% : 112%
 72 000 : x : y

S . P . = L. E

Page 109

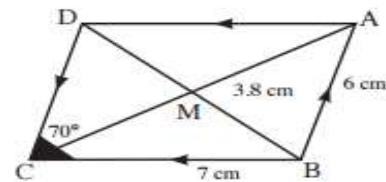
10 Litres of water were poured in a vessel in the shape of a cuboid, its base is square of side length is 25 cm find the height of the water in the vessel.

$$H = V \div \text{base area} , \quad 10 \times 1000 = 10000 \text{ cm}^3$$

$$H = 10000 \div (25 \times 25) = 10000 \div 625 = 16 \text{ cm}$$

Page 109

- (b) In the opposite figure : ABCD is a parallelogram in which $AB = 6 \text{ cm}$, $BC = 7 \text{ cm}$, $BM = 3.8 \text{ cm}$, $m(\angle C) = 70^\circ$. Without using geometrical instruments find :
 $m(\angle ADC)$, the perimeter of $\triangle BCD$.



$$m(\angle ADC) = 180 - 70 = 110$$

$$\text{Perimeter} = 7 + 6 + 3.8 + 3.8 = 20.6 \text{ cm}$$

Some important questions

The ratio between the perimeter of the square and its side length equal

- A) 1 : 3 B) 3 : 1 C) 1 : 4 D) 4 : 1

The ratio among $\frac{1}{3} : \frac{1}{4} =$

- A) 1 : 2 B) 3 : 4 C) 4 : 3 D) 1 : 4

The ratio between 12 kirats and 2 feddans =

- A) 1 : 2 B) 1 : 4 C) 2 : 3 D) 4 : 1

If $A : B = 2 : 3$, $B : C = 3 : 5$, then $A : C =$

- A) 2 : 3 B) 2 : 5 C) 3 : 5 D) 3 : 2

From the properties of the proportion , then the product of the extremes = the product of the

- A) Ratio B) Means C) Area D) Percentage

If $\frac{3}{4} = \frac{x}{20}$, then $x =$

- A) 30 B) 6 C) 15 D) 60

20 % of 200 pounds = pounds

- A) 10 B) 20 C) 30 D) 40

If a length in drawing is 2 cm. and its real length is 20 m. , then the drawing scale equals

- A) 1 : 10 B) 1 : 100 C) 1 : 1000 D) 1 : 10 000

Final Revision

Grade 6

If the length of Suez Canal on a map of drawing scale $1 : 1\,100\,000$ is 15 cm., then its real length in km. equals

- A) 155 B) 165 C) 170 D) 185

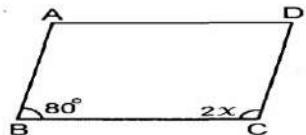
The two diagonals are equal in length and perpendicular in

- A) square B) triangle C) rhombus D) rectangle

In the opposite figure :

ABCD is a parallelogram in which
 $m(\angle B) = 80^\circ$ and $m(\angle C) = 2x$
, then the value of x in degrees =

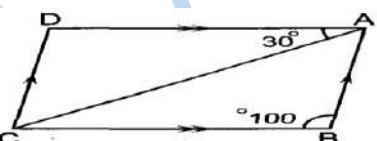
- A) 100 B) 80 C) 50 D) 40



In the opposite figure :

ABCD is a parallelogram
 $\rightarrow m(\angle B) = 100^\circ$ and $m(\angle CAD) = 30^\circ$
, then $m(\angle BAC) =$

- A) 50 B) 130 C) 70 D) 60



The volume of a cuboid with a squared base of side length 6 cm. and its height is 10 cm. equals cm^3

- A) 60 B) 120 C) 360 D) 600

If the sum of the edge lengths of a cube = 144 cm. , then its volume equals

- A) 144 cm B) 144 cm^2 C) 1728 cm D) 1728 cm^3

$\frac{3}{4}$ litre =

- A) 75 ml B) 750 cm^3 C) 75 dm^3 D) 0.075 m^3

The given data are descriptive except the

- A) Age B) Address C) Blood type D) Date of birth

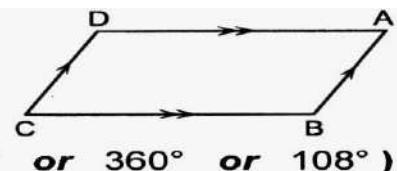
The range of the values : 7 , 3 , 6 , 9 and 5 =

- A) 3 B) 4 C) 5 D) 6

In the opposite figure :

ABCD is a parallelogram , then
 $m(\angle A) + m(\angle B) =$

(90° or 180° or 360° or 108°)



Final Revision

Grade 6

. Choose the correct answer from those given:

1) The ratio between the two numbers $3 : 9$ is ($\frac{1}{6}$ or $\frac{3}{2}$ or $\frac{1}{3}$ or $\frac{2}{3}$)

2) If $\frac{7}{2} = \frac{21}{x}$, then $x =$ (6 or 21 or 12 or 7)

3) The following data are descriptive except
(the favourite colour or address or age or blood species)

4) $4\ 200\ 000\ \text{cm}^3 =$ m^3 . (42 or 420 or 4.2 or 4 200)

5) A cube, the perimeter of its base is 36 cm, then its volume = cm^3
(36 or 729 or 378 or 216)

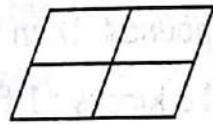
6) $5\ \text{mL} =$ m^3 . (0.5 or 0.05 or 0.005 or 5)

7) $\frac{9}{20} =$ % (40 or 45 or 60 or 90)

8) The volume of a cuboid whose dimensions are 20 cm, 30 cm and 50 cm = dm^3
(10 or 25 or 30 or 50)

9) $500\ \text{gm} : 1\ \frac{1}{2}\ \text{kg} =$ (1 : 2 or 1 : 3 or 2 : 3 or 1 : 5)

10) In the opposite figure, the number of parallelograms
which can be obtained is



(4 or 5 or 7 or 9)

11) 4.6 litres = ml (46 or 460 or 4 600 or 46 000)

12) If the length of a rectangle whose area equals $24\ \text{cm}^2$ is 6 cm, then the ratio
between its perimeter to its length equals (4 : 1 or 10 : 3 or 12 : 5 or 3 : 2)

13) If the drawing scale is 1 : 2 000 and the real length is 20 m, then the drawing
length is cm. (1 or 2 or 3 or 4)

14) If $\frac{x}{18} = 10\%$, then $x =$ ($\frac{6}{5}$ or $\frac{9}{5}$ or $\frac{18}{5}$ or $\frac{9}{50}$)

15) The antecedent of the ratio $\frac{3}{7}$ is (3 or 7 or otherwise)

16) If $a : b = 3 : 5$ and $b : c = \frac{2}{5}$, then $a : c =$: (6 : 25 or 6 : 10 or 10 : 25)

1) A sum of money is divided between two persons in the ratio 3 : 5 If the share
of the second exceeds the share of the first by L.E. 30 Find the share of the firs

- 2) agricultural plow ploughs 6 feddans in 3 hours. If another one ploughs 10feddans in 4 hours Which of the two plows is better in performance
- 3) If the real distance between two cities is 180 kilometers and the drawing scale of a Map $1 : 9\,000\,000$, What is the distance between them on the map
- 4) A man bought a flat for L.E. 150 000 , he sold it at 5 % loss. .Calculate the selling price of the flat
- 5) A father distributed L.E. 6 300 among his three sons , if the share of the first was third of the money and the ratio between the share of the second and the third is equal $3 : 2$.Calculate the share of each of them
- 6) In the feast festival , one of the shops made a discount 20 % for the price of a refrigerator which equal 2 400 pounds , Find the price of the refrigerator after discount
- 7) A cube , the perimeter of its base is 40 cm. Calculate the volume
- 8) 10 liters of water were poured in a vessel in the shape of a cuboid , its base is a square of side length 25 cm , find the height of water

The following table shows the age of visitors to an exhibition within an hour of the day:

Visitor's age	10 –	20 –	30 –	40 –	Total
Number of visitors	6	9	12	10	37

- 1) Draw the frequency curve for this distribution.
 2) What is the number of visitors whose ages are less than 30 years ?

Best Wishes

Complete:-

The ratio between any two numbers = _____

The proportion is

Drawing scale = _____

The percentage is a ratio with second term =

The difference between the greatest and the smallest value in set of individuals is called

5 Kg : 3000gm = :

300 gm : $1\frac{1}{2}$ Kg = :

The ratio between 18 hours and one day is :

The ratio between the side length of the square and its perimeter = :

$\frac{3}{2} : 3\frac{1}{3} = :$

$2\frac{3}{5} : 4\frac{1}{3} \quad 6\frac{1}{2} = :$

If X , 18 , 6 , 9 are proportional quantional . then X =

If $\frac{5}{9} = \frac{15}{X}$, then X =

If $\frac{X+7}{6} = 4$, X =

If $\frac{a}{b} = \frac{c}{d}$ then a x d = x

If a : b = 2:3 , b : c = 6:7 then a: c = :

$\frac{9}{20} = \%$

If $\frac{x}{3} = 9\%$, then X =

The diagonals are perpendicular in and

The diagonals are equal in length in and

The rectangle is a parallelogram in which

If ABCD is a parallelogram then $m(\angle A) + m(\angle C) = \dots$

4.6 Liter = m.L

$3500\text{dm}^3 = \dots \text{m}^3$

$\frac{3}{4}$ Liter = Cm^3

If the drawing scale is > 1 is called (Reduction , Magnification)

The opposite data are descriptive except (favorite colour – birth day – age – blood)

If the values of a frequency distribution lie between (20 , 60) then the range of this distribution =

If the drawing length = 2 cm and real = 6 meters , then the drawing scale = :

The volume of cuboid whose dimensions are 5 ,3 ,6 cm = cm^3

The volume of cube =

The volume of a cuboid = 400cm^3 and its length =8cm , its width = 5cm , then the height =

The volume of the cube which the sum of all its edge length 36 cm =

A cube the perimeter of its base is 36cm , then its volume = cm^3 .

1) Three persons set a company . at the end of the year the profits has been divided the share of the first = $\frac{5}{3}$ the share of the second . , the share of the second = $\frac{4}{3}$ the share of the third . if the share of the first more than the third by 8250 pounds what is the share of each of them?

2) Three persons involved in a business . the first paid L.E 60000 the second paid L.E80000 and the third paid L.E90000 . at the end of the year the profit was L.E 20700 . Calculate the share of each of them .

3) A sum of money is divided between two persons in the ratio 3 : 5 if the share of the second exceeds the share of the first by L.E 30. find the share of the first .

- 4) The ratio between the length of a rectangle to its width = $7 : 4$ its perimeter is 44 cm . find the length and the width of the rectangle and Calculate its area .
- 5) If the distance between two cities is 180 Km and the drawing scale is $1 : 9000000$ How long is the distance between the two cities on the map .
- 6) A car consumes 20 Liters of fuel to cover a distance of 180 Km , how many Liters is needed to cover a distance of 540 Km .
- 7) The ratio between the measurements of angles in a triangle is $2 : 3 : 4$ find the measure for each angle in this triangle .
- 8) The ratio between men and women in a factory is $7 : 3$ find the percentage of the number of men and woman in this factory .
- 9) A man sold his car for L.E 10800 find his loss if it is 10 % .
- 10) A man bought a car for L. E 39400 find the selling price if the percentage of profit is 8 % .
- 11) A woman bought a refrigerator in the time of Occasion with price L.E 2185 after discount equates 5 % find the price of the refrigerator before discount.
- 12) Distribute L.E 45000 among three persons in the ratio $3 : 5 : 7$.
- 13) If a car covered 220 Km in 2 hr. calculate the speed of the car .
- 14) A machine produces 500m. of cloth in 2 hr. another machine produces 600m in $2\frac{1}{2}$ hr. which one is better ?
- 15) A cube of metal its edge length = 12cm. need to be melted down and converted into alloys in the form of a cuoid with dimensions 3 , 4 , 6 cm. calculate the number of alloys that can be obtained.
- 16) A vessel in the shape of a cube with edge 20 cm. is filled with honey . Calculate a) the capacity of vessel b) if the price of 1 litre is L.E 7 find the price of honey .
- 17) How many bottles of 750 ml, each can be filled with 300 litre of water ?
- 18) A tin in the shape of a cuboid its dimensions are 15 , 24 , 30 cm. its filled with honey , the price of one litre of it is L.E 25 , find the price of the honey in the tin .

Complete:

- 1) If $a:b = 3:5$ and $b:c = 2:5$, then $a:b:c = \dots$
- 2) The ratio between the two numbers $3\frac{1}{5}$ and 9.6 = \dots

3) $300 \text{ gm} : 1\frac{1}{2} \text{ kg.} = \dots$

- 4) The ratio between the side length of an equilateral triangle and its perimeter = \dots

5) $\frac{2}{3} : \frac{3}{4} : \frac{1}{2} = \dots : 9 : \dots$

- 6) If $a:b = 2:3$ and $b = 9$, then $a = \dots$

7) $\frac{2}{7} : 2\frac{1}{3} = \dots$

- 8) The ratio between the side length of a square and its perimeter = $\dots : \dots$

- 9) The first term in the ratio $4:7$ is \dots

- 10) The ratio of circumference of a circle to its diameter = $\dots : \dots$ Or $\frac{\dots}{\dots}$

- 11) The ratio of circumference of a circle to its radius = $\dots : \dots$

- 12) $6.3 : 3 : 5.4 = \dots : \dots : \dots$

- 13) 12 kirats and 1.25 feddan. = \dots

- 14) If $\frac{2}{5} = \frac{x}{20}$, then $x - 2 = \dots$

- 15) 12 hours : 2 days = $\dots : \dots$

- 16) Drawing scale = \dots

- 17) If 12% of a number is 240, then this number = \dots

- 18) The square is a parallelogram with \dots

- 19) If 6, x, 10 and 5 are proportional quantities, then $x = \dots$

- 20) The number of edges of the cuboid is \dots

- 21) $7600 \text{ cm}^3 = \dots \text{ litres.}$

- 22) $1 - (35\% + 0.65) = \dots$



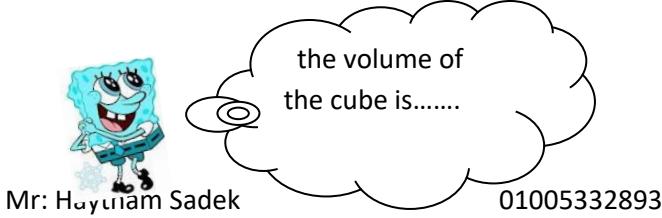


- 23) The volume of the cuboid = \times
- 24) The comparing between two different quantities is
- 25) The diagonals are equal in length in each of And
- 26) The fourth proportional for 5 , 8 and 15 is
- 27) If the dimensions of a cuboid are equal, then it is a
- 28) If a car covers 180 km. in 3 hours, then its average speed = km/hr.
- 29) The four angle are right in each of and
- 30) The height of a cuboid =

2 Choose the correct answer:

- 1) The litre is a unit for measuring(length, area , time , capacity)
- 2) If : $\frac{2}{7} = \frac{x}{21}$, then $x =$ (6 , 2 , 9 , 14)
- 3) Number of faces of a cube = (6 , 8 , 12 , 4)
- 4) 5.6 litres = dm³ (560 , 56 , 56000 , 5600)
- 5) If : $\frac{4}{x+7} = \frac{1}{3}$, then $x =$ (7 , 5 , 4 , 2)
- 6) If the sum of the edge lengths of a cube is 144 cm, then it's volume equals (1728 cm , 1728cm³ , 144 cm³ , 144 cm²)
- 7) If the numbers 18 , 24 , x and 60 are proportional,
then the value of $x =$ (45 , 30 , 40 , 55)
- 8) $4200000 \text{ cm}^3 =$ m³ (42 , 420 , 4.2 m 4200)
- 9) The two diagonals of the parallelogram
(equal in length, perpendicular, bisect each other, parallel)

- 10) If a is equal half b, then $a : b =$ (1 : 2 , 2 : 1 , 1 : 3 , 2 : 3)
- 11) If the volume of a cuboid is 1800 cm^3 . and its base dimensions are 30 cm. and 10 cm. , then its height = cm. (9 , 6 , 12 , 15)



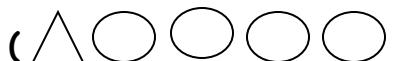
12) If the length of a picture of an insect is 4 cm. and its real length is $\frac{1}{2}$ cm. then the drawing scale is (1:4 , 4:1 , 1:8 , 8:1)

13) $1\frac{3}{4} = \dots \%$ (175 , 150 , 125 , 225)

14) 15 % of the number = 90 , the number is? (500 , 600 , 6 , 60)

15) The cubic centimeter is a cube whose edge length is
(1 m , 1 mm , 1 dm , 1 cm)

16) Cubic metre is a unit of measuring
(perimeter , weight , area , volume)

17) 
( ,  ,  , )

18) The drawing length the real length (in magnification) (> , < , =)

19) The cube whose volume is 125 cm^3 . Then its edge length =
(25 cm. , 5 cm. , 5 cm^2 , 10 cm^3)

20) The number of vertices of the cuboid = (8 , 6 , 12 , 10)

21) AB , ABB , ABBB , AB , ABB , (ABBB , ABB , AB , A)

22) If the drawing length = 2 cm. and the real length = 6 meters, then the drawing scale equals (1:2 , 1:3 , 1:300 , 1:30)

23) The diagonals are perpendicular in
(Parallelogram , Rhombus , Rectangle)

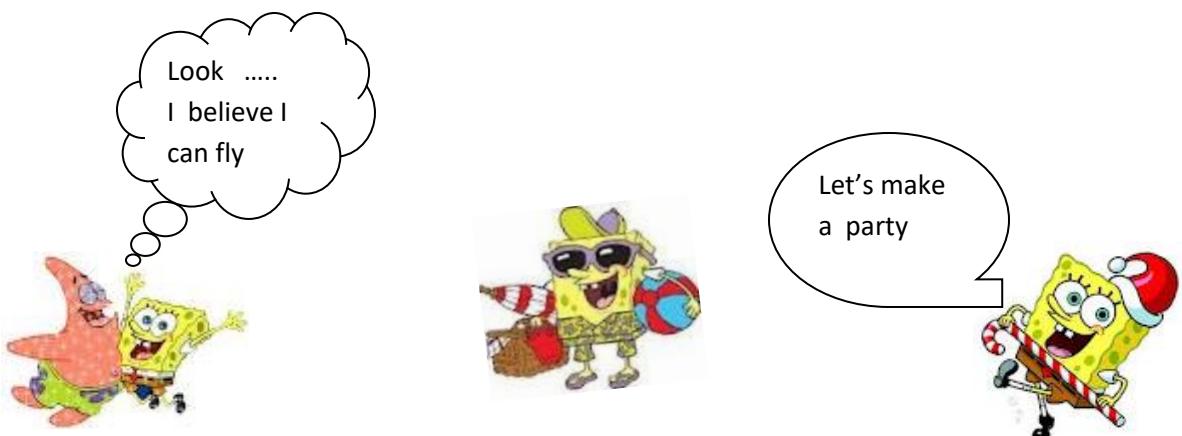
24) The width of a rectangle = $\frac{4}{5}$ it's length, then the length of the rectangle = of its perimeter. ($\frac{4}{9}$, $\frac{5}{9}$, $\frac{5}{18}$, $\frac{4}{18}$)

25) If the ratio among the measures of angles of a triangle is 2 : 3 : 4 , then the measure of the greatest angle is (60 , 40 , 80 , 100)

Wait.....
I have new
idea



- 1) Hoda, Mona and Thanaa participated in a commerce. Hoda paid LE 1500, Mona paid LE 2000 and Thanaa paid LE 2500. At the end of the year the loss of the company was LE 1200 Find the share of each of them from loss.
- 2) The ratio between the number of boys and that of girls in a school is 9 : 7 . If the number of boys is 378 . Find the number of girls .
- 3) If the ratio among the ages of Hoda, Mona and Ola is 2 : 4 : 5 and if the difference between the age of Hoda and that of Mona is 8 years. Calculate the age of each of Hoda, Mona and Ola.
- 4) If the ratio among the measures of the angles of a triangle is 5 : 6 : 7 and the measure of the first angle is 50° . Find the measure of each of the other two angles.
- 5) The ratio between the length and the width of a rectangle is 9 : 5 . If the perimeter of the rectangle is 56 meters, find out the length and the width of the rectangle, then calculate its area.
- 6) The number of pupils of a primary school in the 1st, the 2nd and the 3rd grades is 240 pupils. If the ratio among the three grades is 5 : 4 : 3. Calculate the number of pupils in each grade.
- 7) In one of our schools, there are 560 students, if the number of girls = $\frac{2}{3}$ the number of boys find each of the number of boys and girls?

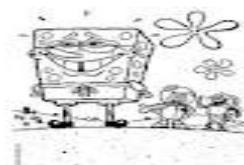


- 8) A car consumes 20 litre of Benzin for covering 210 km, How many litre of Benzin does the car consume to cover 630 km.
- 9) A piece of building land is distributed between two brothers in the ratio 7:5 . If the share of the first one exceeds the share of the second by 80 square metre. Find the area of the land and the share of each of the first and the second.
- 10) A picture of me of habitation edifices is taken with a drawing scale 1 : 1000. If the height of the edifice in the picture is 3 cm. What is its real height?
- 11) A magnified picture of an insect was taken with enlargement ratio 100:1 If the length of the insect on the picture is 2.5 cm.What is the real length of the insect?
- 12) A plough for agricultural land, ploughs 6 Feddan within 3 hours. Find the rate of work of this plough. If another plough, ploughs 10 Feddan within 4 hours. Which of them is better than the other.
- 13) If the percentage of the number of girls in a class which is mixed is 67% find the percentage of the number of boys in this class.
- 14) Khaled bought a flat for L.E 150 000, After selling it he found that the percentage of his loss was 5% .Calculate the selling price of the flat.
- 15) A company for selling the electric sets It shows T.V for LE 2100. If the percentage of the profit is 12 % find the buying price of t.v
- 16) two persons started a commercial business the first paid LE 5000 and the second paid LE 8000, At the end of the year the profit was LE 3000. Calculate the share of each of them from the profit .
- 17) A picture was taken to an artificial scene with a drawing scale 1:100. If the real length of a tree is 8 meter find its length in the picture.

If the real length of a tree is 8 meter find its length in the picture.



Haytham

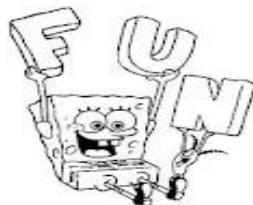


01005332893

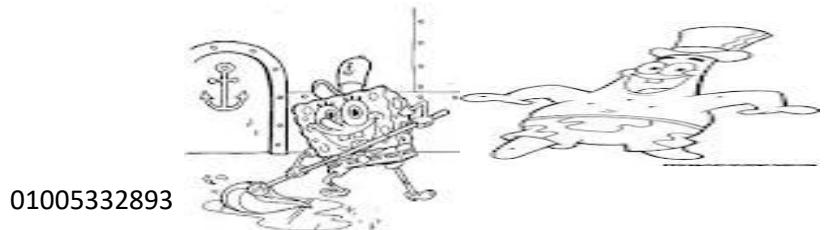


I love math so much

- 18) If the distance between two cities on a map is 10 cm, the real distance between them is 120 km, Find the drawing scale of the map. And if the distance between two other cities on the same map is 6 cm calculate the real distance between them.
- 19) Ahmed bought an automatic washing machine for LE 3400 and the discount was 10% Calculate the original price of the washing machine. Before discount .
- 20) A box is in the shape of a cuboid of dimensions 30 cm. , 24 cm. and 18 cm. if it is filled with cubic pieces of sweets of side length 6 cm , find the number of pieces of sweets.
- 21) The edge of a metallic cube is 30 cm. long. It is melted and reshaped as a cuboid of base dimensions 15 cm. and 45 cm. Find the height of the cuboid.
- 22) The sum of the dimensions of a cuboid is 40 cm. and the ratio among them is 2 : 3 : 5 find its volume.
- 23) If the sum of the dimensions of a cuboid is 12 cm , its length is 6 cm. and its width is 4 cm. , calculate its volume.
- 24) How many litres of honey are enough to fill a box in the shape of a cuboid , its internal dimensions are 50 cm. , 35 cm. and 20 cm ?
- 25) The capacity of a bottle that is filled with medicine is 0.95 litre. It is needed to be put in some small bottles , each is of capacity 10 cm^3 . Find the number of the small bottles.
- 26) A cube of metal whose edge length equals 12 cm. needed to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm, 4 cm. , and 6 cm. , calculate the number of alloys that can be obtained.



am Sadek



01005332893

27) In the opposite figure:

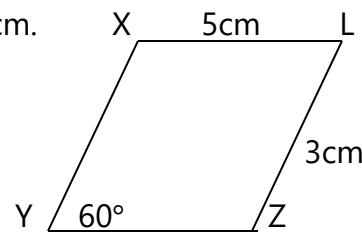
XYZL is a parallelogram in which : $XL = 5 \text{ cm}$, $LZ = 3 \text{ cm}$.

and $m(\angle Y) = 60^\circ$

find: 1) $m(\angle X) = \dots\dots\dots$

2) $m(\angle L) = \dots\dots\dots$

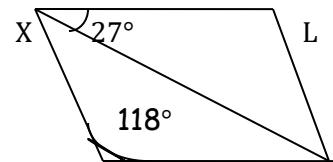
3) the perimeter of the parallelogram XYZL



28) In the opposite figure:

XYZL is a parallelogram in which $m(\angle Y) = 118^\circ$

And $m(\angle LXZ) = 27^\circ$ find: 1) $m(\angle L) = \dots\dots\dots$



2) $m(\angle YXZ) = \dots\dots\dots$

3) $m(\angle YZL) = \dots\dots\dots$

29) In the opposite figure :

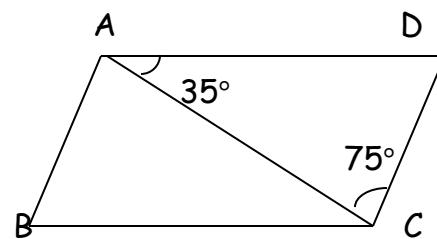
ABCD is a parallelogram in which:

$M(\angle CAD) = 35^\circ$ and $m(\angle ACD) = 75^\circ$,

Find: 1) $m(\angle D)$

2) $m(\angle B)$

3) $m(\angle CAB)$



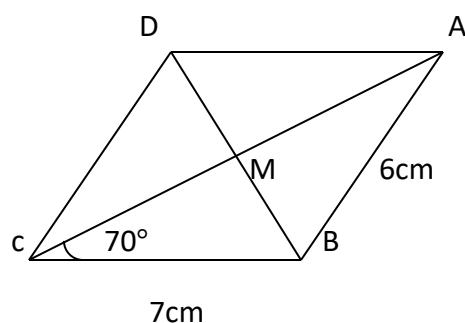
30) In the opposite figure:

ABCD is a parallelogram in which : $AB = 6 \text{ cm}$,

$BC = 7 \text{ cm}$. , $BM = 4 \text{ cm}$. and $m(\angle DCB) = 70^\circ$, find

1) $m(\angle ADC)$, 2) $m(\angle DAB)$

3) Perimeter of $\triangle BCD$



General Revision (1st term)

1 Choose the correct answer :

- (1) Parallelogram is a rectangle if one of its angles is
(right or acute or obtuse or straight)
- (2) The ratio between the side length of the square to its perimeter
is : (1:5 or 1:3 or 1:4 or 4:1)
- (3) A car covers 240 km. in 3 hours , then the car speed is km./hour
(60 or 80 or 120 or 90)
- (4) The simplest form of the ratio 2.4 : 18 = :
(2:15 or 1:6 or 6:7 or 5:3)
- (5) In the proportion 6 , 8 , 3 , x , the value of x is
(5 or 7 or 4 or 3)
- (6) All of the following are considered descriptive data except
(name or age or address or hobbies)
- (7) $16\ 000\ \text{cm}^3$ = litres. (1.6 or 16 or 160 or 0.16)
- (8) $\frac{2}{5}$ = % (20 or 40 or 60 or 10)
- (9) If $a:b = 2:3$ and $b:c = 5:6$, then $a:c =$:
(5:9 or 9:7 or 5:8 or 15:11)
- (10) The sum of all edge lengths of a cube is 84 cm.
, then its volume is cm^3 (49 or 343 or 28 or 14)
- (11) 15 % of 400 = (40 or 70 or 80 or 60)
- (12) 2 kg. : 3 500 gm. = : (2:3 or 7:6 or 4:7 or 5:4)

2 Complete the following :

- (1) The range of the set of values 7 , 3 , 8 , 9 and 5 is
- (2) Diagonals are equal in length in each of and
- (3) If the drawing length is 3 cm. and the real length is 18 m. , then the drawing scale is :
- (4) The volume of a cuboid is $720\ \text{cm}^3$, and its height is 9 cm. , then its base area is cm^2
- (5) If the buying price of some goods is L.E. 2 000 and it sold for L.E. 1 800 ,
then the percentage of loss is %

General Revision (1st term)

Choose the correct answer:

- (1) If $a:b = 2:3$, $b:c = 6:7$, then $a:c = \dots$
(7:4 or 4:7 or 12:7 or 6:7)
- (2) If 6, 8, 3 and x are proportional numbers, then $x = \dots$
(2 or 4 or 18 or 24)
- (3) $6500 \text{ dm}^3 = \dots \text{ m}^3$
(6.5 or 65 or 605 or 650)
- (4) $\frac{1}{2} : \frac{1}{3} = \dots : \dots$
(1:1 or 2:3 or 3:2 or 3:1)
- (5) The ratio between the side length of the square and its perimeter
 $= \dots : \dots$
(1:1 or 1:3 or 1:4 or 4:1)
- (6) The diagonals are perpendicular and equal in length in
(parallelogram or rectangle or rhombus or square)
- (7) If the height of the fence of the villa in the design is 5 cm. and its real height
is 5 metres, then the drawing scale is
(1:1 or 1:10 or 1:100 or 1:1000)
- (8) The percentage is a ratio whose second term is
(10 or 100 or 1000 or 0.01)
- (9) The volume of a cube of edge length 3 cm. = cm^3
(8 or 27 or 64 or 125)
- (10) If $a:b = 2:3$ and $b:c = 3:5$, then $a:c = \dots : \dots$
(2:5 or 3:5 or 5:2 or 5:3)
- (11) If the ratio between the weight of Hani and the weight of Ahmed is 5:6 and
the weight of Ahmed is 60 kg., then the weight of Hani = kg.
(40 or 50 or 60 or 10)
- (12) The opposite data are quantitative data except
(weight or age or temperature degrees or blood species)

General Revision (1st term)



Choose the correct answer between brackets :

- (1) If the values in the frequency distribution lies between (40 , 90) , then the range of this distribution = (130 or 50 or 80 or 180)
- (2) If 5 , 6 , x and 12 are proportional numbers , then x = (8 or 12 or 5 or 10)
- (3) An agricultural machine ploughs 17 feddans in 8.5 hours , then the rate of performance of the machine = feddans/hour (2 or 4 or 2.5 or 4.5)
- (4) If a : b = 50 % and b : c = 2 : 3 , then a : c = - (1 : 2 or 2 : 3 or 2 : 6 or 3 : 1)
- (5) If the volume of a cuboid equals 360 cm³ , its length is 9 cm. and its width is 8 cm. , then its height = cm. (5 or 40 or 48 or 72)
- (6) If one angle of the parallelogram is right angle , and has two adjacent sides are equal in length , then it is called (trapezium or square or rectangle or rhombus)
- (7) The ratio between the side length of the square and its perimeter = (4 : 1 or 1 : 4 or 1 : 3 or 1 : 6)
- (8) If the drawing scale < 1 , then it expresses (enlargement or congruency or reduction or equivalent)
- (9) 4.250 cm³ = mm³ (4 250 or 42.5 or 0.425 or 4.25)
- (10) $3\frac{4}{7} : 3\frac{1}{8}$ = (7 : 8 or 8 : 7 or 1 : 4 or 1 : 1)
- (11) If the price of some goods is L.E. 256 and if the price became L.E. 192 during the discount , then the percentage of the discount equals (16 % or 75 % or 33 % or 25 %)
- (12) ABCD is a parallelogram , then m ($\angle A$) + m ($\angle B$) = ° (90 or 108 or 180 or 360)

General Revision (1st term)

1 Choose the correct answer of the following :

- (1) The following data are quantitative except
(age or weight or name)
- (2) If the sum of the edge lengths of a cube is 36 cm. , then its volume
= cm³ (3 or 27 or 12)
- (3) If $a:b = 2:3$, $b:c = 6:7$, then $a:c =$ (7:4 or 12:7 or 4:7)
- (4) $12 \text{ dm}^3 =$ cm³ (1200 or 12000 or 120)
- (5) $\frac{2}{3} : 3 \frac{1}{3} =$: (1:5 or 2:3 or 2:5)
- (6) If one angle of a parallelogram is right , then it called a
(rectangle or square or rhombus)
- (7) $1 \frac{3}{4} =$ % (75 or 175 or 25)
- (8) An agricultural tractor ploughs 28 feddans in 4 hours , the time that needed
to plough 42 feddans is hours. (4 or 12 or 6)
- (9) If $\frac{x}{18} = \frac{4}{6}$, then $x + 1 =$ (13 or 11 or 12)
- (10) If length of an insect in a picture is 40 cm. , and the real length is 2 mm.
, then the drawing scale is (200:1 or 20:1 or 1:200)
- (11) If a car covered 280 km. in 4 hours , then the rate of covered distance per
hour = km./hr. (7 or 70 or 700)
- (12) Two wires , the ratio between their lengths is 3 : 4 and their sum is 140 cm.
, then the length of the second wire is cm. (30 or 40 or 80)

2 Complete each of the following :

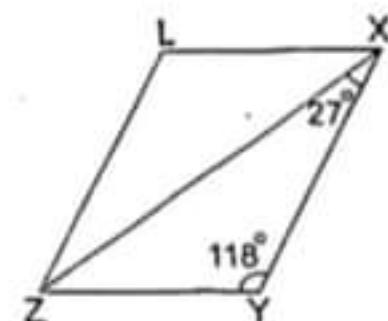
- (1) $\frac{1}{4} : \frac{1}{3} : \frac{1}{2} =$: : (in the simplest form)
- (2) If the drawing scale > 1 , then this expresses
- (3) △○△△○○△△△ (in the same pattern)
- (4) The difference between the maximum value and the minimum value is
called
- (5) The number of edges of a cube = edges.
- (6) Area of the square = side length \times
- (7) $300 \text{ mm}^3 =$ cm³
- (8) From the properties of the proportion , the product of the extremes
= the product of the

General Revision (1st term)



Complete each of the following :

- (1) 30 days = weeks. (to the nearest week)
- (2) $1\frac{3}{4}$ = %
- (3) If the volume of a cuboid is 64 cm^3 and the area of its base is 16 cm^2 , then the height = cm.
- (4) If x , 18 , 6 and 9 are proportional quantities , then x =
- (5) If $a : b = 2 : 3$ and $b : c = 3 : 5$, then $a : c$ =
- (6) If the marks of 6 pupils in one test are 29 , 33 , 57 , 40 , 36 , 49 , then the range of these marks =
- (7) In the opposite figure :
XYZL is a parallelogram in which
 $m(\angle Y) = 118^\circ$ and $m(\angle YXZ) = 27^\circ$, then :
[a] $m(\angle L) = \dots^\circ$
[b] $m(\angle LXZ) = \dots^\circ$
- (8) The area of the triangle = $\frac{1}{2} \times \dots \times \dots$



Choose the correct answer from those given :

- (9) The opposite data are descriptive except
(The favorite colour or birthday or age or blood species)
- (10) 4.6 litres = mL. (46 or 460 or 4 600 or 46 000)
- (11) $\frac{2}{3} : 3\frac{1}{3} = \dots : \dots$ (1:2 or 2:5 or 1:10 or 1:5)
- (12) The volume of the cuboid whose dimensions are 2 cm. , 3 cm. , 5 cm.
= cm^3 (10 or 25 or 30 or 50)
- (13) The centimetre cube is a unit for measuring
(the perimeter or the area or the volume or the length)
- (14) If one of the angles of a parallelogram is right and two of its adjacent sides are equal in length , then it is called
(rhombus or square or triangle or rectangle)
- (15) The drawing scale =
($\frac{\text{length in reality}}{\text{length in drawing}}$ or $\frac{1}{\text{length in reality}}$ or $\frac{\text{length in drawing}}{\text{length in reality}}$ or $\frac{1}{2}$)

General Revision (1st term)

1 Choose the correct answer :

- (1) If $3a = 4b$, then $\frac{a}{b} = \dots$ ($\frac{3}{4}$ or $\frac{2}{3}$ or $\frac{4}{3}$ or $\frac{3}{2}$)
- (2) If $\frac{4}{6} = \frac{12}{x}$, then $x + 2 = \dots$ (16 or 18 or 20 or 22)
- (3) 300 grams : $1\frac{1}{2}$ kilogram = : (1:3 or 1:5 or 10:1 or 10:30)
- (4) $1 - (35\% + 25\%) = \dots$ ($\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{4}$)
- (5) The ratio between the circumference of the circle and its diameter length is ($\frac{\pi}{2}$ or π or $\frac{1}{\pi}$ or 2π)
- (6) $300 \text{ cm}^3 + 3.7 \text{ litres} = \dots$ litres (6.7 or 4 or 3.6 or 303.7)
- (7) An agricultural machine ploughs 6 feddans in 3 hours, then the rate of performance of the machine is feddans/hour (2 or 15 or 3 or 25)

2 Complete each of the following :

- (1) The following figure in this pattern  is
- (2) Drawing scale =
- (3) If the volume of a cuboid is 560 cm^3 and its height is 8 cm., then its base area is cm^2 .
- (4) If the marks of 5 pupils in a test are 36, 40, 57, 29 and 33, then the range of marks is
- (5) $1 - (25\% + 30\%) = \dots$ %
- (6) 80 minutes : 2 hours = : (in the simplest form)
- (7) A map is drawn with a scale 1 : 200 000, if the distance between two cities is 8 km. in reality, then the length between them on that map is
- (8) The ratio between length of side of an equilateral triangle and its perimeter = :
- (9) If the volume of a cuboid = 40 cm^3 , and its height = 4 cm., then the area of its base = (10 cm. or 10 cm^2 or 160 cm^2 or 160 cm.)
- (10) The sum of measure of two consecutive angles in a parallelogram = (60° or 90° or 180° or 360°)

General Revision (1st term)

(1) The ratio between Mina's age and Ahmed's age is 7 : 11 , and the difference between their ages is 8 years , find the age of each of them.

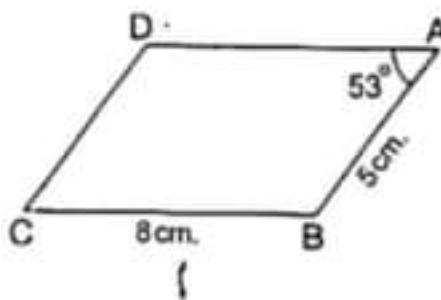
(2) A picture of a tree is drawn with a drawing scale 1 : 100 , if the real height of the tree is 8 m. , find its length in the picture.

(3) A swimming pool is in the shape of cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. , find its capacity in litre.

(4) In the opposite figure :

ABCD is a parallelogram in which $\overrightarrow{AB} = 5 \text{ cm.}$,
 $BC = 8 \text{ cm.}$ and $(\angle A) = 53^\circ$ Find :

- [a] $m(\angle B)$
- [b] The length of \overline{AD} and the length of \overline{DC}



(5) The following table shows the ages of visitors to an exhibition within an hour of a day :

Visitor's age	10 -	20 -	30 -	40 -	50 -	Total
Number of visitors	6	9	12	10	8	45

Draw the frequency curve for this distribution.

General Revision (1st term)

(1) A metallic cube of edge length 12 cm. , it needs to be converted it into ingots in the shape of cuboid each of them of dimensiona 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

(2) The ratio among the lengths of the sides of a triangle is 2 : 3 : 4 and the preimeter of the triangle = 36 cm.

Calculate the length of each side of the triangle.

(3) In the opposite figure :

ABCD is a parallelogram in which

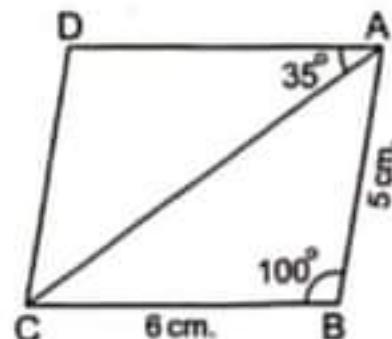
$AB = 5 \text{ cm.}$, $BC = 6 \text{ cm.}$ $m(\angle B) = 100^\circ$

and $m(\angle DAC) = 35^\circ$, without using measuring tools , find :

[a] $m(\angle D) = \dots \cdot ^\circ$

[b] $m(\angle ACD) = \dots \cdot ^\circ$

[c] The perimeter of the parallelogram ABCD = cm.



(4) The following table shows the ages of visitors to a museum during a certain period :

Visitor's age	10 -	20 -	30 -	40 -	50 -	Total
Frequency	7	10	15	20	13	65

Draw the frequency curve for this distribution.

General Revision (1st term)

- (1) A primary school has 540 pupils. If the ratio between the number of boys to the number of girls is 4 : 5 , calculate the number of each boys and girls.

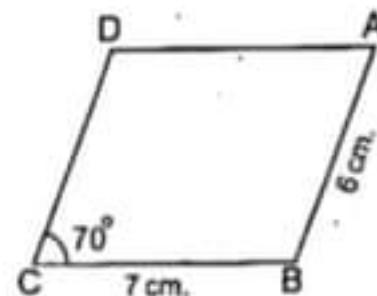
.....
.....
.....
.....
.....

- (2) In the opposite figure :

ABCD is a parallelogram in which AB = 6 cm.
, BC = 7 cm. and $m(\angle C) = 70^\circ$

Find :

- [a] $m(\angle D) = \dots \dots \dots$
[b] AD = cm.



- (3) A company for selling the electric sets. It shows TV set for L.E. 2 100 , if the percentage of the profit is 12 % Find the buying price of TV set.

.....
.....
.....
.....

- (4) Three persons shared in a business , the first paid L.E. 60 000 , the second paid L.E. 80 000 and the third paid L.E. 90 000 At the end of the year the profit was L.E. 20 700 Find the share of each one.

.....
.....
.....
.....
.....

- (5) The following table shows the marks of 30 pupils in mathematics :

Marks	10 –	20 –	30 –	40 –	Total
Number of students	5	7	10	8	30

Draw the frequency curve for this distribution.

General Revision (1st term)

(1) If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit
Calculate the selling price.

(2) A cube of cheese with edge length 15 cm. , it is wanted to divide it into small cuboids each of dimensions 3 cm. , 5 cm. and 1 cm. Find the number of resulting small cuboids of cheese.

(3) A cuboid tin with inner dimensions 2 dm. , 3 dm. and 4 dm. was full of honey.
Calculate the price of honey , given that the price of one litre is L.E. 20

(4) The real distance between Cairo and Alexandria is 220 km. , find the distance between them on a map drawn with a scale 1 : 500 000

(5) A map is drawn with a scale 1 : 1 000 000 Find the real distance between El-Fayoum and Beni Suef in kilometres if the map distance is 5 cm.

The following table shows the marks of 100 students in one month in math test :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.

Complete

1	The ratio between the side length of equilateral triangle and its perimeter
2	If the drawing scale > 1 it expresses
3	If $\frac{x}{9} = 15\%$ then $x = \dots$
4	A rectangle will be square if its diagonals are
5	If the length of an insect in picture is 10 cm and its real length 2 mm , then the drawing scale is
6	IF $A : B = 4 : 3$, $B : C = 2 : 3$, then $A : C = \dots$
7	The age is Data
8	The circumference of the circle : the length of diameter =
9	The third proportional of the numbers 0.8 , 4.8 and 12 is
10	1.5 liters + $0.5 \text{ dm}^3 + 500 \text{ cm}^3 = \dots$ Liters
11	15% of = 75
12	The rhombus whose one of its angles is right is called
13	The base of a cuboid is a square , its volume is 2000 cm^3 and its height is 5 cm , then the side length of its base is cm
14	10 Liters of water were poured in a vessel as cuboid with square base of side length 25 cm , then the height of water = Cm
15	$\frac{13}{20} = \dots \% \quad$
16	The parallelogram with right angle is called
17	The ratio between the perimeter of square and its side length
18	The range of the numbers 50 , 25 . 35 , 20 is

19	If $\frac{x+18}{9} = 8$ then $x = \dots$
20	The diagonals are perpendicular in ,
21	If the drawing scale < 1 it expresses
22	The cube has Faces in the shape of , the number of edges , the number of its vertices
23	8400 cm^3 of water is poured in to a vessel in the shape of cuboid with base area $700 cm^2$. then its height = cm
24	The number of sets = range $\div \dots$
25	If the sum of edges of cube is 132 cm then its volume = cm^3
26	12 kirats : 1.25 feddans = :
27	If $\frac{2}{5} = \frac{x}{16}$, then $x - 2 = \dots$
28	The product of means the product of
29	$\frac{3}{7} \times \frac{7}{3} = \dots \% \quad$
30	A factory produces 4000 cans of juice in 8 hours , then the rate of the production is cans / hour
31	ABCD is a parallelogram in which $\overline{AB} \perp \overline{BC}$, then its called
32	If the ratio among the measures of angles of triangle $1 : 2 : 3$, then the measure of the smallest angle is
33	If the perimeter of the base of cube = 36 cm , then its volume = cm^3
34	If the real length of an insect is 0.3 mm and its length in the picture is 4.5 cm , then the drawing scale = :

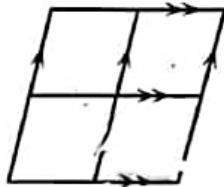
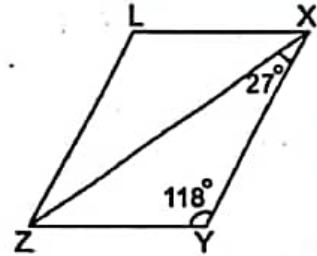
35	The antecedent of the ratio $\frac{3}{5}$ is and its consequent is
36	$\frac{1}{2} \text{ K.g} : 700 \text{ gm} = \dots$
37	If the percentage of boys in a school is 35 % , then the percentage of girls
38	Sara deposited 9000 Pounds in a bank with an interest 10 % , then the total of money after one year = Pounds
39	The numbers 1 , 2 , 6 and are proportional
40	The diagonals are perpendicular and equal in length in
41	If the sum of two numbers = 180 and the ratio between them is 2 : 7 , then the smallest number is
42	$300 \text{ m}^3 = \dots \text{ cm}^3$
43	The area of the base of the cuboid =
44	The figure XYZL in which $XY = ZL$, $YZ = XL$, $XY \neq YZ$, the two diagonals are equal in length . then the name of the figure is
45	The parallelogram is a quadrilateral in which the sum of the measures of any two consecutive angles =
46	The following data are descriptive data except(favorite color , age , birth place , blood species)
47	A wooden box in the form a cube , its external volume is 1000 cm^3 , and its capacity is 729 cm^3 , the volume of wood = cm^3
48	If a merchant bought a TV set for L.E 1000 , then sold it for L.E 1200 , then the percentage of profit = %
49	4.63 Liters = cm^3
50	The comparing between two quantities of different kind is

51	The drawing scale is the ratio between and
52	The comparing between two quantities with same kind is called
53	$\frac{1}{2} : \frac{3}{4} = \dots : \dots$
54	If Adel scored 13 Marks from 20 marks in an exam , then the percentage of the scored mark = %
55	$28\% + \dots \% = 1$
56	$9.63 \text{ dm}^3 = \dots \text{ Liters}$
57	An edifice of height 12 meters , its shade at a moment was 4 meters , a tree is neighboured to it and its shade is 2 m at same moment , then the height of the tree = M
58	If the sum of face areas of a cube is 54 cm^2 , then its volume = cm^3
59	The diagonals are equal in and
60	30 % of 200 =
61	The capacity is the volume of the inner space for any is a cuboid with equal dimensions
62	The four sides are equal in length is and
64	If the volume of a cube = 125 cm^3 , then its base area = cm^2
65	If Hoda bought a mobile phone for 900 Pounds with a discount 10 % , then the price of the mobile phone before the discount is pounds
66	If 100 grams from a food stuff gives 300 calories , how many calories will be given from 30 grams of this food ?

67	If one of the angles of the parallelogram is right and two adjacent sides are equal in length is called =
68	The difference between the greatest value and the smallest value of the set of values is called =
69	The volume of cuboid = X
70	$125 : 25 = \dots : \dots$
71	The drawing scale =
72	$2.5 : 5.75 = \dots : \dots$
73	The ratio between the child's age and father's age = $2 : 15$, if the child's age is 6 years , then his father's age =years
74	Hassan spends L.E 70 within a week , then the rate of what Hassan spends daily =
75	Ahmed bought a car for L.E 50000 and sold it by profit 10 % , then the selling price = L.E
76	If the shirt with price L.E 120 at 20% discount , then the value of discount = L.E
77	There are 560 student . if the ratio between numbers of girls to the number of boys is $3 : 5$ then the number of girls = girls
78	A cuboid of base area is 16 cm^2 and its height is 5 cm , then the volume = cm^3
79	The ratio between the radius of the circle and its circumference =
80	The line segment resulted from intersection of two faces is called
81	A merchant sold his goods with profit 15 % , then the percentage of the selling goods%
82	If the area of face of cube 4 cm^2 , then the volume of cube

83	Parallelogram in which its diagonals are perpendicular and not equal in length is called
84	If the length of the road on a map with a scale $1 : 10000$ is 15 cm , then its real length in Km is
85	A trader sold some goods by losing percentage 20 % , then the percentage of the selling price was =%
86	If $7 : 13 = x : 52$ then $x =$
87	All angles are right and two diagonals are perpendicular in
88	If the ratio between two dimensions of rectangle is 3 : 4 and its perimeter is 140 cm , then its area cm^2
89	The original price for a shirt is 65 pounds with discount 15 % , then the paid value = pounds
90	cm^3 is the measuring unit of
91	If $\frac{3}{5} = \frac{x}{10}$ = then $x : 12 =$
92	The proportional is
93	If the real distance between two cities is 9 km , and the distance between them on a map is 3 cm the the drawing scale
94	If a car consumes 20 liters of fuel to cover a distance 250 km . then rate of consumption of fuel =
95	The ratio between three numbers is 3 : 4 : 7 and their sum is 70 , then the greatest number =
96	A tractor plough 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is hours
97	If 20% of a number is 80 , then the number =

98	If a is half b , and b is twice c , then $a : c = \dots$
99	$\frac{2}{3} : 2 \frac{2}{3} = \dots$
100	$\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = \dots$
101	The area of triangle $= \frac{1}{2} \times \dots \times \dots$
102	A merchant bought a TV set for L.E 1800 and he sold it for L.E 2000 then his profit = L.E
103	The following figure in this pattern  is
104	If the buying price of some goods is L.E. 2 000 and it sold for L.E. 1 800 , then the percentage of loss is %
105	$\frac{2}{3} : 3 \frac{1}{3} = \dots : \dots$ (1:2 or 2:5 or 1:10 or 1:5)
106	In the opposite figure : XYZL is a parallelogram in which $m(\angle Y) = 118^\circ$ and $m(\angle YXZ) = 27^\circ$, then : [a] $m(\angle L) = \dots^\circ$ [b] $m(\angle LXZ) = \dots^\circ$
107	In the following , the smallest number is (0.5 , 0.25 , 0.125 , 0.375)
108	30 days $\simeq \dots$ weeks
109	The number of parallelograms in the opposite figure is (9 or 7 or 5 or 4)
110	If $3a = 4b$, then , $\frac{a}{b} = \dots$ ($\frac{3}{4}$ or $\frac{2}{3}$ or $\frac{4}{3}$ or $\frac{3}{2}$)

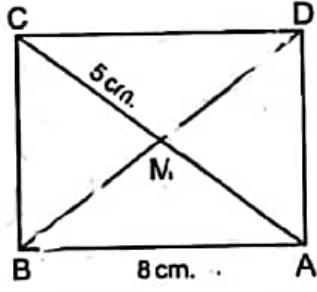
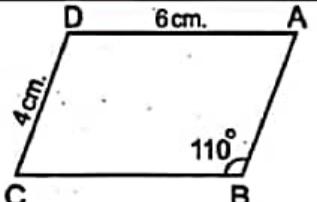
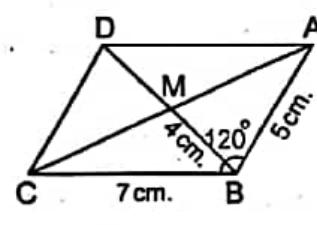


111	The opposite data are quantitative data except (weight or age or temperature degrees or blood species)
112	If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 and the weight of Ahmed is 60 kg. , then the weight of Hani = kg. (40 or 50 or 60 or 10)
113	ABCD is a parallelogram , then $m(\angle A) + m(\angle B) = \dots \text{ }^\circ$
114	If the number of sets is 8 and length of set is 5 , then the range =
115	In parallelogram ABCD , $m(\angle A) + m(\angle C) = 140^\circ$, then $m(\angle B) = \dots \text{ }^\circ$
116	If the volume of a cuboid equals 315 cm^3 , its base with length 9 cm. and width 7 cm. , then its height = cm. (7 or 5 or 63 or 45)
117	If the volume of a cube = 0.125 cm^3 , then its edge length = cm. (25 or 0.25 or 0.5 or 5)
118	If the lower limit of the set = 10 and the upper limit = 30 , then the centre =
119	The ratio between two numbers =
120	If ABCD is a square then AB : CD =
121	If $\frac{A}{B} = \frac{C}{D}$ then \times = \times
122	$250 \text{ P.T} : 7\frac{1}{2} \text{ L.E} = \dots \dots \dots$
123	In the opposite figure The number of trapezoids is (2 or 4 or 3 or 5)



Essay Problems

- 1** A triangular piece of land the ratio between lengths of the sides $4 : 6 : 7$, if the perimeter of this land is 51 meters , Find the length of each side
- 2** Khaled bought a flat for L.E 150000 , the he sold it at 5 % loss . Calculate the selling price .
- 3** Three persons started in a business . the first paid L.E 1500 , the second paid L.E 2500 and the third paid L.E 2000 , at the end of the year the net profit was L.E 6000 , Calculate the share of each
- 4** If the drawing scale of a map is $1 : 1500000$, and the distance between two cities on a map = 3cm , find the real distance between them in k.m
- 5** A map is drawn with a scale $1 : 400000$, if the real distance between two cities is 20 km , Find the distance on the map
- 6** The ratio among the measures of the angles of a triangle is $2 : 3 : 4$ Find the measure of each angle in the triangle.
- 7** Nahed bought an automatic washing for L.E. 3 600 and the discount was 10 % Calculate the original price of the washing machine before discount.
- 8** A container has 16 litres of oil , it is wanted to put them in small bottles , the capacity of each of them is 400 cm^3 Calculate the number of bottles.
- 9** If buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.
- 10** The ratio between Mina's age and Ahmed's age is $7 : 11$, and the difference between their ages is 8 years , find the age of each of them.

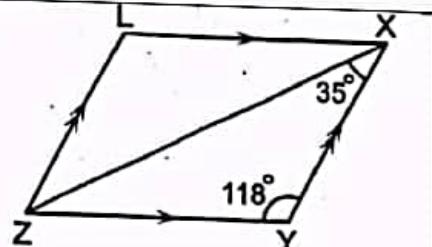
- 11** A cube of metal its edge length is 12 cm. If it is wanted to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm., 4 cm. , and 6 cm. Calculate the number of alloys that can be obtained.
- 12** A company for selling the electric sets. It shows TV set for L.E. 2 100 , if the percentage of the profit is 12 % Find the buying price of TV set.
- 13** In the opposite figure :
 ABCD is a rectangle in which $AB = 8 \text{ cm}$. and $MC = 5 \text{ cm}$. Find :
 [a] Length of \overline{AM} [b] Length of \overline{DB}
 [c] Perimeter of $\triangle AMB$
- 
- 14** The ratio between the measures of two consecutive angles in a parallelogram is 4 : 5 Find the measure of each of them.
- 15** In the opposite figure :
 ABCD is a parallelogram , find :
 [a] $m(\angle D)$ [b] $m(\angle A)$
 [c] The length of \overline{AB} [d] The perimeter of the shape ABCD
- 
- 16** In the opposite figure :
 ABCD is a parallelogram in which
 $AB = 5 \text{ cm.}$, $BC = 7 \text{ cm.}$
 $BM = 4 \text{ cm.}$, $m(\angle ABC) = 120^\circ$
 Without using geometrical instruments
 , find $m(\angle ADC)$ and the perimeter of $\triangle BCD$
- 
- 17** A box in a cuboid shape with square base its side length is 40 cm. and height 30 cm. is filled by bars of soaps in a cuboid shape with dimensions 6 cm. , 4 cm. and 5 cm. Find the greatest number of soaps can be put in the box.

18

In the opposite figure :

XYZL is a parallelogram in which
 $m(\angle Y) = 118^\circ$, $m(\angle YXZ) = 35^\circ$

Find : $m(\angle L)$, $m(\angle LXZ)$



19

An auto fair owner bought a car for L.E. 45 000 , then he spent L.E. 5 000 for repairing it , then he sold it for L.E. 55 000 Calculate :

- [a] The profit after selling .
- [b] The percentage of profit.

20

A car covers 300 km . in 4 hours and another covers 65 km in 50 minutes , which of the two cars is faster ?

21

A container has 12 liters of oil , its is wanted to put it in small bottles the capacity of each 100 cm^3 , calculate the number of this bottles

22

A cube Shaped vessel , its internal edge length is 30 cm , its filled with oil .

- a) Calculate the capacity of oil in liters
- b) If the price of one liter is 9.5 Pound , find the price of oil.

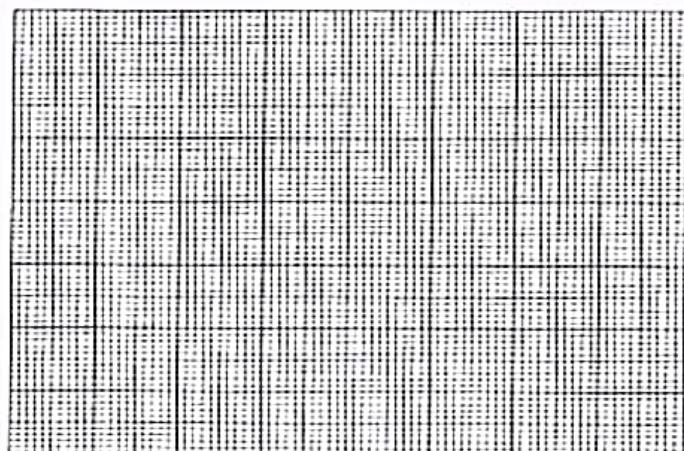
23

The following table shows the extra money which *00 workers got
In a month in a factory :

The extra money	20 -	30 -	40 -	50 -	60 -	70 -	Total
Number of workers	20	15	30	20	10	5	100

[a] Draw the frequency curve of this distribution.

[b] What is the number of workers who obtained extra money less than 50 pounds ?



1	1:3	42	300000000	84	1.5
2	Magnification	43	$\frac{\text{Volume}}{\text{height}}$	85	80
3	1.35	44	Rectangle	86	28
4	Perpendicular	45	180	87	Square
5	50:1	46	Age	88	1200
6	8:9	47	271	89	55.25
7	Quantitive	48	20	90	Volume
8	$\pi:1$	49	4630	91	1:2
9	2	50	Rate	92	Equality between two ratios or more
10	2.5	51	Drawing , real length	93	1 : 300000
11	500	52	Ratio	94	0.08 liters / km
12	Square	53	2:3	95	35
13	20	54	65	96	6
14	16	55	72	97	400
15	65	56	9.63	98	1:1
16	Rectangle	57	6	99	1:4
17	4:1	58	27	100	6:4:3
18	30	59	Square , rectangle	101	$B \times h$
19	54	60		102	200
20	Square , rhombus	61	Solid	103	
21	Minimization	62	Cube	104	10
		63	Square rhombus		
22	6 , square , 12 , 8	64	25	105	
23	12	65	1000	106	118 , 35
24	Length of set	66	90	107	0.125
25	1331	67	Square	108	4
26	2:5	68	Range	109	9
27	4.4	69	Base area $\times h$	110	$\frac{4}{3}$

28	Equal , extremes	70	5 : 1	66	Blood species
29	100	71	$\frac{D.L}{R.L}$	67	50
30	500	72	10:23	68	180
31	Rectangle	73	45	69	40
32	30	74	10 L.E/day	70	110
33	729	75	55000	71	5
34	150 : 1	76	30	72	0.5
35	3, 5	77	210	73	20
36	5 : 7	78	80	74	$\frac{\text{first number}}{\text{secon number}}$
37	65 %	79	$1 : 2 \pi$	75	1 : 1
38	9900	80	Edge	76	$A \times D = B \times C$
39	12	81	115	77	1 : 3
40	Square	82	8	78	9
41	40	83	Rhomus		

Essay Problems

1	12, 18 21 m	13	5, 10 , 18
2	142500	14	80 , 100
3	1500, 2500, 2000	15	110 , 70 , 4 cm , 20 cm
4	45	16	120 , 20
5	5	17	400
6	40 , 60 , 80	18	118 , 27
7	4000	19	5000 , 10 %
8	40	20	Second is faster
9	80640	21	120
10	14 . 22	22	27 liters 256.5 L.E